
 NEW JERSEY CENTER  
FOR TEACHING & LEARNING

## Progressive Mathematics Initiative®

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NEW JERSEY CENTER  
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## 3rd Grade

### Place Value

2015-12-14

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click on the topic to go  
to that section

## Place Value

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### Digits

# 247

Numbers, like 247, have three digits. Each digit has a different place value.

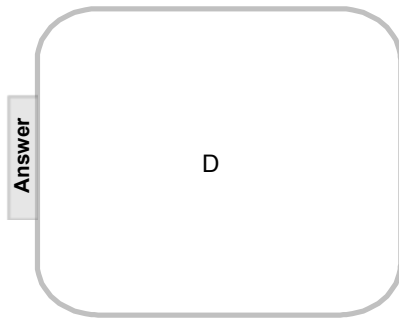
1 What place value is the digit 7 in?

- A thousands
- B tens
- C hundreds
- D ones

# 247

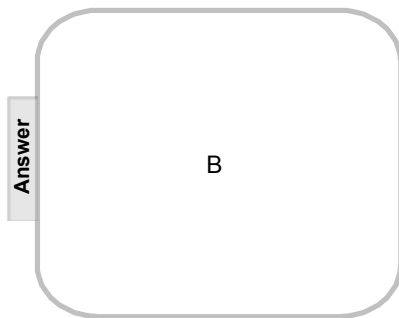
1 What place value is the digit 7 in?

- A thousands
- B tens
- C hundreds
- D ones



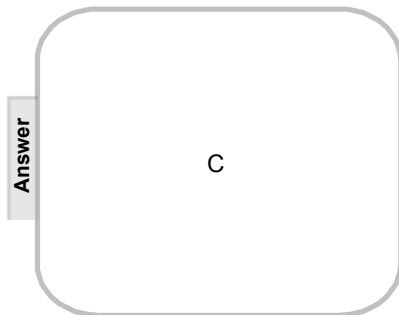
2 What place value is the digit 4 in?

- A thousands
- B tens
- C hundreds
- D ones



3 What place value is the digit 2 in?

- A thousands
- B tens
- C hundreds
- D ones



2 What place value is the digit 4 in?

- A thousands
- B tens
- C hundreds
- D ones

**247**

3 What place value is the digit 2 in?

- A thousands
- B tens
- C hundreds
- D ones

**247**

## Place Value

**247**

The right digit is the ones place. It tells you that there are 7 ones.

The middle digit is the tens place. It tells you that there are 4 sets of ten.

The left digit is the hundreds place. It tells you that there are 2 sets of one hundred.

**Place Value**

Hundreds	Tens	Ones
2	4	7

Therefore, there are 2 sets of 100, plus 4 sets of 10, plus 7 ones in the number 247.

$$(200+40+7=247)$$

**click for interactive web site**



National Library of Virtual Manipulatives

click for another interactive site

4 How many tens are in the number 539?

- A 5
- B 3
- C 9

4 How many tens are in the number 539?

- A 5
- B 3
- C 9

Answer

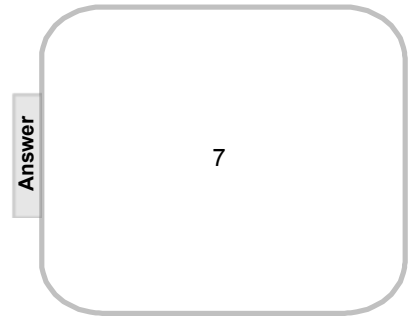
3

5 How many hundreds are in the number 724?

- A 7  
 B 2  
 C 4

5 How many hundreds are in the number 724?

- A 7  
 B 2  
 C 4

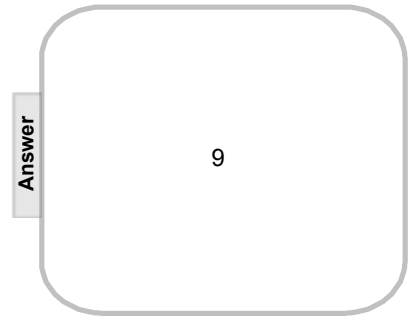


6 How many ones are in the number 359?

- A 5  
 B 9  
 C 3

6 How many ones are in the number 359?

- A 5  
 B 9  
 C 3



7 Which cave's length has a 1 in the tens place?

- A Air Cave  
 B Water Cave  
 C Wind Cave

United States Caves	
Cave	Length in Miles
Wind Cave	116
Air Cave	129
Water Cave	107

Answer



Click above to be directed to a place value identification game.

### Place Value Game

Tap the dice to roll it. Copy the numbers below in the order that they are rolled.

\_\_\_\_\_

Circle the digit in the tens place.  
Cross out the digit in the hundreds place.  
Underline the digit in the ones place.

Write the number that is 10 more than this number.

\_\_\_\_\_

Write the number that is 100 less than this number.

\_\_\_\_\_

Sorry, this element requires Flash, which is not currently supported in PDFs.

Please refer to the original Notebook file.



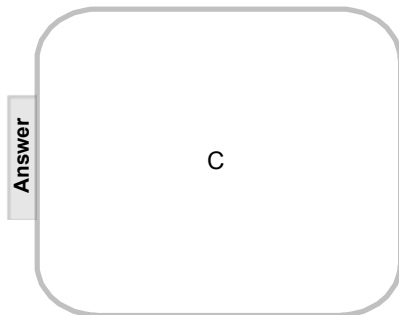
erase and try several examples

8 What is the value of the underlined digit? 21

- A 21  
 B 920  
 C 20  
 D 2

8 What is the value of the underlined digit? 21

- A 21  
 B 920  
 C 20  
 D 2

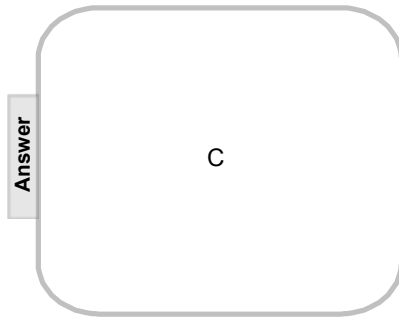


9 What is the value of the underlined digit? 743

- A 700  
 B 740  
 C 3  
 D 30

9 What is the value of the underlined digit? 743

- A 700
- B 740
- C 3
- D 30

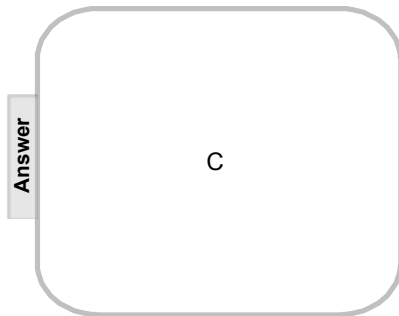


10 What is the value of the underlined digit? 493

- A 490
- B 4
- C 400
- D 493

10 What is the value of the underlined digit? 493

- A 490
- B 4
- C 400
- D 493

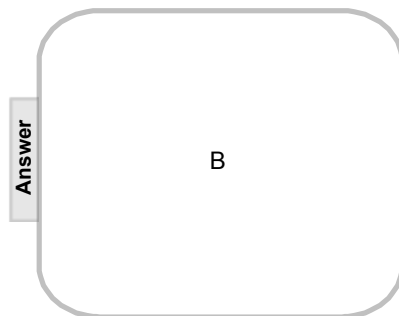


11 What number is 30 more than 325?

- A 625
- B 355
- C 328
- D 55

11 What number is 30 more than 325?

- A 625
- B 355
- C 328
- D 55

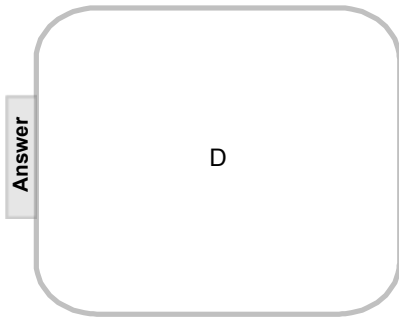


12 What number is 500 more than 325?

- A 375
- B 330
- C 352
- D 825

12 What number is 500 more than 325?

- A 375
- B 330
- C 352
- D 825



## Standard, Numeric, Expanded Forms

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### Forms

You can write numbers in different ways.

Standard form is writing a number out in digits.  
674

Expanded form is writing a number out according to each digit's  
place value.

$$600+70+4$$

Word form is writing a number out in words.  
six hundred seventy-four

### Forms

Take the number 235 and write it in expanded form.

$$\begin{array}{cccc} \underline{\hspace{1cm}} & + & \underline{\hspace{1cm}} & + & \underline{\hspace{1cm}} \\ 300 & & 5 & & 30 & & 3 \\ 50 & & 200 & & 500 & & 20 \end{array}$$

### Forms

Write the number 235 in word form.

\_\_\_\_\_ - \_\_\_\_\_

twenty	five	fifty	two
three	thirty	two hundred	
five hundred		three hundred	

## Forms

Sorry, this element requires Flash, which is not currently supported in PDFs.

Please refer to the original Notebook file.



## Forms

Fill in the blanks in the chart.

Standard Form	Expanded Form	Word Form
753		
	$100 + 50 + 3$	
		seventy-five
		six hundred three
	$900 + 40 + 5$	
654		
	$400 + 60 + 8$	

## Practice

Click for web site practice.

Progress in Mathematics

[Back to Activities](#)

**Expanded Form** Grade 2 Chapter 2

1) Show three ways to name the number. Click on each way.

33

	4 tens 7 ones	$40 + 7$
	1 ten 7 ones	$30 + 3$
	3 tens 3 ones	$10 + 7$

Enter Reset

13 What is the number  $200+50+4$ , written in standard form?

- A two hundred fifty-four
- B 254
- C 200504
- D 200,504

## Practice

Click for web site practice.

SAXON MATH

Look at the number shown in expanded form. What number does it represent? Click on the correct answer.

SCORE:  
46

$400 + 8$

This number is shown in expanded form. What number does it represent? Click on the correct answer.

408

488

480

13 What is the number  $200+50+4$ , written in standard form?

- A two hundred fifty-four
- B 254
- C 200504
- D 200,504

Answer

B

14 What is the number 108, written in expanded form?

- A 100+0+8
- B one hundred eight
- C one hundred and eight
- D 1+0+8

14 What is the number 108, written in expanded form?

- A 100+0+8
- B one hundred eight
- C one hundred and eight
- D 1+0+8

Answer

A

15 What is the number 211, written in word form?

- A two hundred ten-one
- B 200 + 10 + 1
- C two hundred eleven
- D 2 + 1 + 1

15 What is the number 211, written in word form?

- A two hundred ten-one
- B 200 + 10 + 1
- C two hundred eleven
- D 2 + 1 + 1

Answer

C

16 What is the number four hundred two, written in standard form?

- A 4,002
- B 400+0+2
- C 402
- D four hundred and two

16 What is the number four hundred two, written in standard form?

- A 4,002
- B 400+0+2
- C 402
- D four hundred and two

Answer

C

17 Which letter has the number 198 written properly in both word form and expanded form?

- A one hundred ninety-eight,  $1+9+8$
- B one hundred ninety-eight,  $100+90+8$
- C one hundred ninety and eight,  $100+90+8$
- D one hundred ninety and eight,  $1+9+8$

17 Which letter has the number 198 written properly in both word form and expanded form?

- A one hundred ninety-eight,  $1+9+8$
- B one hundred ninety-eight,  $100+90+8$
- C one hundred ninety and eight,  $100+90+8$
- D one hundred ninety and eight,  $1+9+8$

Answer

B

18 What number is missing?

$$500 + ? + 8 = 528$$

- A 2
- B 20
- C 200

18 What number is missing?

$$500 + ? + 8 = 528$$

- A 2
- B 20
- C 200

Answer

B

19 What number is missing?

$$1000 + ? + 40 + 9 = 1749$$

- A 70
- B 700
- C 7

19 What number is missing?

$$1000 + ? + 40 + 9 = 1749$$

- A 70
- B 700
- C 7

Answer

B

## Comparing Numbers

click to return to  
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## Comparing Numbers

There are two symbols we use to compare numbers.

> (greater than)

< (less than)

One number goes on the **left** of the symbol and another number goes on the **right** of the symbol.

The number on the left of the ">" shows the larger number.  
For example:  $2 > 1$

The number on the left of the "<" shows the smaller number.  
For example:  $1 < 2$

## Comparing Numbers

Remember, one number goes on the **left** of the symbol and another number goes on the **right** of the symbol.

The number on the left of the ">" shows the larger number.  
For example:  $2 > 1$   
This means that "2 is greater than 1"

The number on the left of the "<" shows the smaller number.  
For example:  $1 < 2$   
This means that "1 is less than 2"

## Use a Place Value Chart

Compare digits in the same place-value position from left to right.

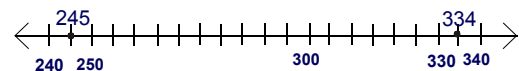
Hundreds	Tens	Ones
3	3	4
2	4	5



3 hundreds is greater than 2 hundreds.  $334 > 245$

## Comparing Numbers

Use a number line  
The numbers are in order from least to greatest.



334 is to the right of 245.  
 $334 > 245$

## Comparing Numbers Game



Click to play a game that compares numbers.

20 Which number is the largest?

- A 485
- B 995
- C 985
- D 495

Slide 53 (Answer) / 268

Slide 54 / 268

20 Which number is the largest?

- A 485
- B 995
- C 985
- D 495

Answer

B

21 Which number has the most hundreds?

- A 156
- B 942
- C 755
- D 1665

Slide 54 (Answer) / 268

Slide 55 / 268

21 Which number has the most hundreds?

- A 156
- B 942
- C 755
- D 1665

Answer

B

22 Which number sentence is written properly?

- A  $169 > 197$
- B  $687 < 129$
- C  $657 < 546$
- D  $983 > 981$

22 Which number sentence is written properly?

- A  $169 > 197$
- B  $687 < 129$
- C  $657 < 546$
- D  $983 > 981$

Answer

D

23 Which number is greater than 845?

- A 651
- B 267
- C 1,845
- D 756

23 Which number is greater than 845?

- A 651
- B 267
- C 1,845
- D 756

Answer

C

24 Which symbol should you use to complete this number sentence?

742 \_\_\_ 582

- A =       B >       C <

24 Which symbol should you use to complete this number sentence?

742 \_\_\_ 582

- A =

Answer

B

25 Which symbol should you use to complete this number sentence?

621 \_\_\_ 628

- A =       B >       C <

25 Which symbol should you use to complete this number sentence?

$$621 \_ 628$$

A =

Answer  C

26 Which symbol should you use to complete this number sentence?

$$451 \_ 475$$

A =

B >

C <

26 Which symbol should you use to complete this number sentence?

$$451 \_ 475$$

A =

Answer  C

27 Part A

What is the number with the least value that can be made with the digits 6, 7, and 5 using all the digits only once?

A 576

B 657

C 675

D 567

From PBA PARCC sample test #16

27 Part A

What is the number with the greatest value that can be made with the digits 6, 7, and 5 using all the digits only once?

A 576

B 657

C 675

D 567

Answer  D

From PBA PARCC sample test #16

28 Part B

Daniel says the number with the greatest value he can make with the digits 5, 7, and 6 using the digits only once is 657 because the 7 is in the place with the greatest value.

- Explain why Daniel is not correct.
- What is the number with the greatest value he can make using all the digits only once?
- Explain how you know this number has the greatest value.

From PBA PARCC sample test #16

28 Part B

Daniel says the number with the greatest value he can make with the digits 7, 6, and 5 is 657 because 7 is the greatest value.

- Explain why Daniel's answer is not correct.
- What is the number with the greatest value that can be made using the digits 7, 6, and 5?
- Explain how you know.

Daniel's answer is not correct because 7 is not the place with the greatest value. It's in the place with the least value. The greatest number is 765. You have to put the digits in order from greatest to least to make the largest number. The greatest digit, 7, is in the hundreds place and has the greatest value. The next-greatest digit, 6, is in the tens place and has the next-greatest value. The least digit, 5, is in the ones place and has the least value.

From PBA PARCC sample test #16

## Ordering Numbers

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## Ordering Numbers

When you order numbers write them from:

least to greatest

or

greatest to least.

## Ordering Numbers

Use place value.

Step 1 Compare the Hundreds.

Step 2 Compare the Tens.

Hundreds	Tens	Ones
2	1	0
2	7	3
2	2	6

Hundreds	Tens	Ones
2	1	0
2	7	3
2	2	6



$$2=2=2$$

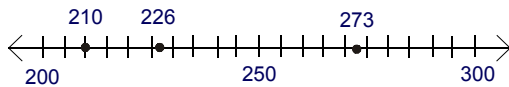


$$1 < 2 < 7$$

So the order is 210; 226; 273.

## Ordering Numbers

Use a number line.



Since 273 is to the right of the other numbers, it is the greatest number.

$$273 > 226 > 210$$

## Ordering Numbers

Put these numbers in order from least to greatest.

Sorry, this element requires Flash, which is not currently supported in PDFs.

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### Ordering Numbers

Put these numbers in order from greatest to least.

Sorry, this element requires Flash, which is not currently supported in PDFs.

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Click to play a place value game.



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Science Education



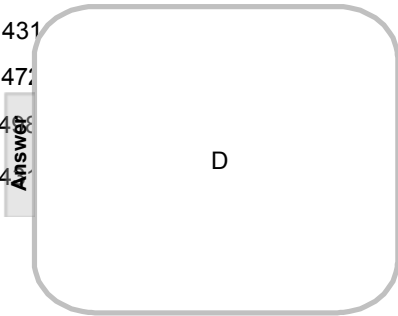
### Place Value Game

Welcome to the Place Value Game!

The goal of the Place Value Game is to create the largest possible number from the digits the computer gives you. Unfortunately, the computer will give you each digit one at a time and you won't know what the next number will be. You are not allowed to rearrange any of the digits you have already placed, so think carefully before you lock a number in place! Good luck!

29 Which group of numbers are in order from largest to smallest?

- A 456, 498, 472, 431
- B 431, 456, 498, 472
- C 431, 456, 472, 498
- D 498, 472, 456, 431



### Ordering Numbers

Tap the dice to roll it. Copy the digits below in the order that they are rolled.

\_\_\_\_\_

Now arrange the digits to make the largest number.

\_\_\_\_\_

Now arrange the digits to make the smallest number.

\_\_\_\_\_

Sorry, this element requires Flash, which is not currently supported in PDFs.

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Challenge:  
Repeat these steps a second time. Then put all of the numbers you created in order from least to greatest!

29 Which group of numbers are in order from largest to smallest?

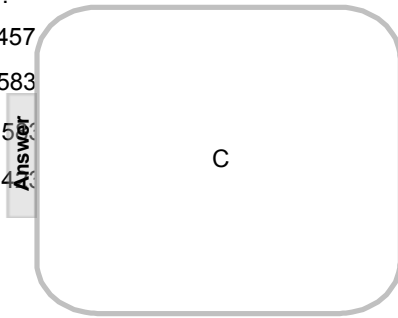
- A 456, 498, 472, 431
- B 431, 456, 498, 472
- C 431, 456, 472, 498
- D 498, 472, 456, 431

30 Which group of numbers are in order from smallest to largest?

- A 511, 423, 583, 457
- B 511, 423, 457, 583
- C 423, 457, 511, 583
- D 583, 511, 457, 423

30 Which group of numbers are in order from smallest to largest?

- A 511, 423, 583, 457
- B 511, 423, 457, 583
- C 423, 457, 511, 583
- D 583, 511, 457, 423

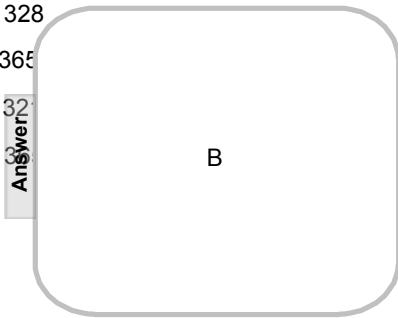


31 Which group of numbers are in order from smallest to largest?

- A 365, 321, 359, 328
- B 321, 328, 359, 365
- C 365, 359, 328, 321
- D 321, 359, 328, 365

31 Which group of numbers are in order from smallest to largest?

- A 365, 321, 359, 328
- B 321, 328, 359, 365
- C 365, 359, 328, 321
- D 321, 359, 328, 365

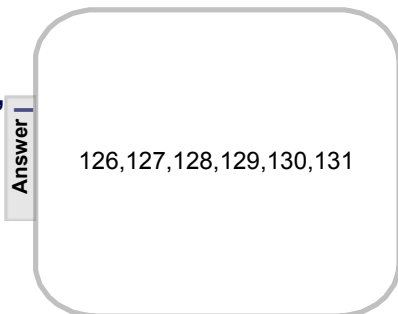


32 What number could fill in the blank and have the numbers ordered from least to greatest?

**34, 45, 125, \_\_\_\_\_, 132**

32 What number could fill in the blank and have the numbers ordered from least to greatest?

**34, 45, 125,**



33 What number could fill in the blank and have the numbers ordered from greatest to least?

**329, 313, \_\_\_\_\_, 301, 295**

33 What number could fill in the blank and have the numbers ordered from greatest to least?

**329, 3**

Answer

312,311,310,309,308,307,306,  
305,304,303,302

### Rounding to the Nearest Ten

Rounding makes numbers that are easier to work with in your head.

- Rounded numbers are only approximate.
- An exact answer generally can not be obtained using rounded numbers.
- Use rounding to get an answer that is close but that does not have to be exact.

### Rounding to the Nearest Ten

Sorry, this element requires Flash, which is not currently supported in PDFs.

Please refer to the original Notebook file.



## Rounding to the Nearest Ten

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### Rounding to the Nearest Ten

Rounding is all about place value. When rounding to the nearest tens place you know you will either stay at that tens place or round up to the next tens place. Look next door at the digit in the ones place.

If the digit is a 0, 1, 2, 3, or 4 you will stay at the current tens place. For example, 74 rounded to the nearest ten would be 70.

If the digit is a 5, 6, 7, 8, or 9 you will round up to the next possible tens place. For example, the number 88 rounded to the nearest ten would be 90.

### Rounding to the Nearest Ten

Round each to the nearest ten. Use the magnifying glass to check your answers.

48 ⇒

19 ⇒

22 ⇒

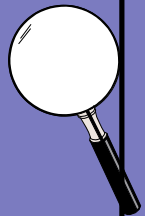
33 ⇒

81 ⇒

67 ⇒

55 ⇒

75 ⇒



## Practice Rounding to the Tens

(click here)

**PRACTICE**

Round the number to the nearest ten

Start

18

0 10 20 30 40 50 60 70 80 90 100

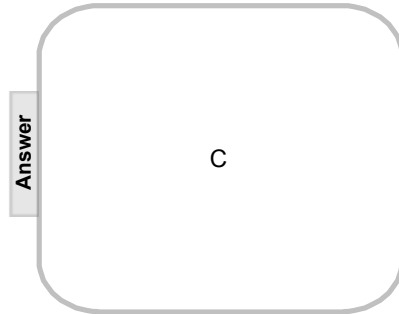
Correct!

34 What is 86 rounded to the nearest ten?

- A 70
- B 80
- C 90

34 What is 86 rounded to the nearest ten?

- A 70
- B 80
- C 90

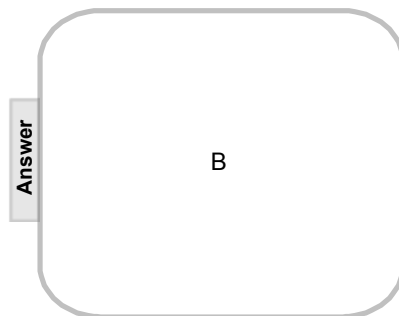


35 What is 32 rounded to the nearest ten?

- A 20
- B 30
- C 40

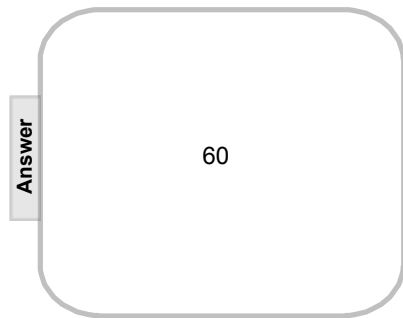
35 What is 32 rounded to the nearest ten?

- A 20
- B 30
- C 40



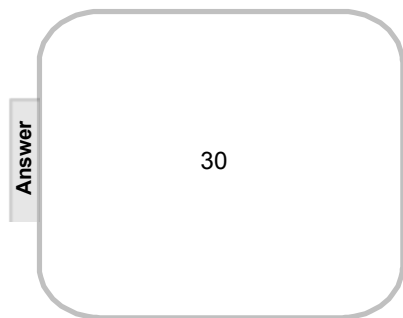
36 What is 64 rounded to the nearest ten?

36 What is 64 rounded to the nearest ten?



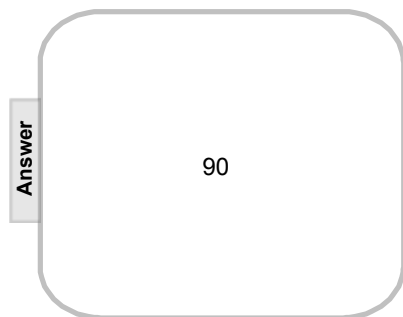
37 What is 27 rounded to the nearest ten?

37 What is 27 rounded to the nearest ten?



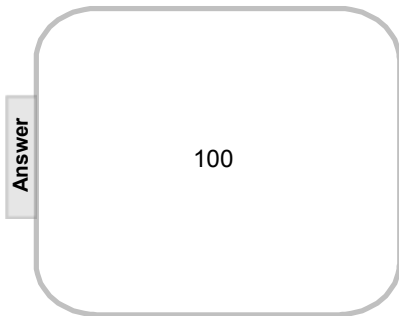
38 What is 93 rounded to the nearest ten?

38 What is 93 rounded to the nearest ten?



39 What is 98 rounded to the nearest ten?

39 What is 98 rounded to the nearest ten?



40 What is 418 rounded to the nearest ten?

40 What is 418 rounded to the nearest ten?



41 What is 274 rounded to the nearest ten?

41 What is 274 rounded to the nearest ten?



- 42 The owners of a new toy store have 888 puzzles to sell.
- They sell 237 puzzles the first month.
  - They sell 461 puzzles the second month.

Which of these shows the three given numbers, each rounded to the nearest 10?

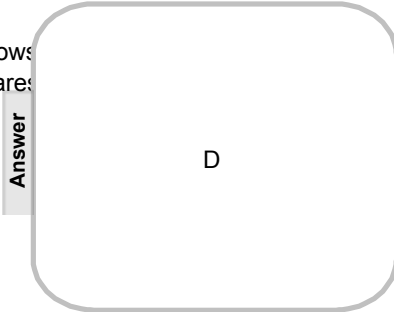
- A 880, 230, 470
- B 880, 230, 460
- C 890, 240, 470
- D 890, 240, 460

- 42 The owners of a new toy store have 888 puzzles to sell.
- They sell 237 puzzles the first month.
  - They sell 461 puzzles the second month.

Which of these shows  
rounded to the nearest

- A 880, 230, 470
- B 880, 230, 460
- C 890, 240, 470
- D 890, 240, 460

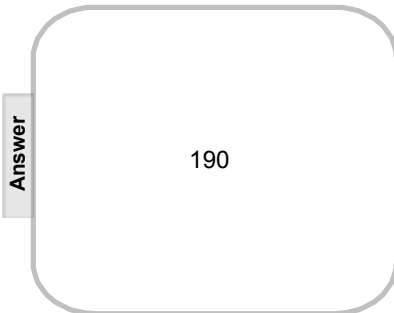
From EOY PARCC sample test #15



- 43 Use the rounded numbers from the last question to find about how many puzzles the owners have left to sell.

From PARCC sample test

- 43 Use the rounded numbers from the last question to find about how many puzzles the owners have left to sell.



From PARCC sample test

## Rounding to the Nearest Hundred

[click to return to table of contents](#)

### Rounding to the Nearest Hundred

When rounding to the nearest hundreds place you know you will either stay at that hundreds place or round up to the next hundreds place. Look next door at the digit in the tens place.

If the digit is a 0, 1, 2, 3, or 4 you will stay at the current hundreds place. For example, 124 rounded to the nearest hundred would be 100.

If the digit is a 5, 6, 7, 8, or 9 you will round up to the next possible hundreds place. For example, the number 178 rounded to the nearest hundred would be 200.

### Rounding to the Nearest Hundred

Another way of thinking about it would be:

To round numbers to the nearest hundred, make the numbers that end in 1 through 49 into the next lower number that ends in 00. For example 424 rounded to the nearest hundred would be 400.

Numbers that have the last two digits of 50 or more should be rounded up to the next even hundred. The number 679 rounded to the nearest hundred would be 700.

The number 988 rounded to the nearest hundred would be 1000 because that is the next possible hundred. There were 9 hundreds and now there are 10.

**Rounding to the Nearest Hundred**

Sorry, this element requires Flash, which is not currently supported in PDFs.

Please refer to the original Notebook file.

**Rounding to the Nearest Hundred**

Round each to the nearest hundred. Use the magnifying glass to check your answers.

345 ⇒

479 ⇒

624 ⇒

821 ⇒



550 ⇒

220 ⇒

773 ⇒

945 ⇒

**Practice Rounding to the Hundreds**

(click here)

ROUNDING NUMBERS: PRACTICE

Round the number to the nearest hundred.

Start 00:25

198

0 100 200 300 400 500 600 700 800 900 1000

Choose the correct answer.

You have 0 correct and 0 incorrect.

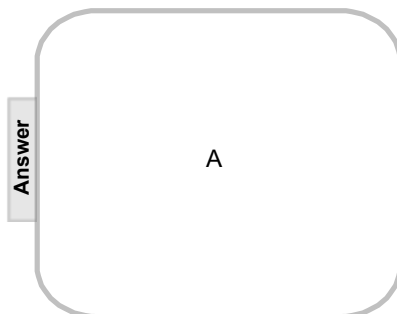
This is 0 percent correct. Report Totals

44 What is 319 rounded to the nearest hundred?

- A 320
- B 300
- C 400

44 What is 319 rounded to the nearest hundred?

- A 320
- B 300
- C 400

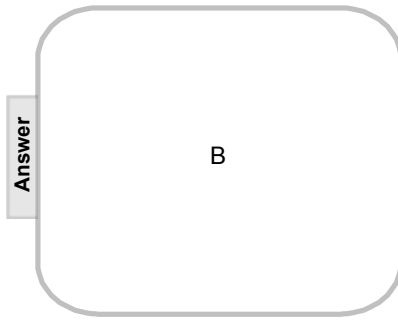


45 What is 781 rounded to the nearest hundred?

- A 700
- B 800
- C 780

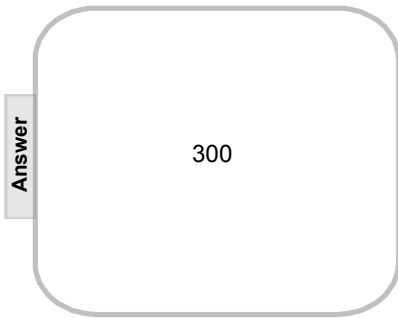
45 What is 781 rounded to the nearest hundred?

- A 700
- B 800
- C 780



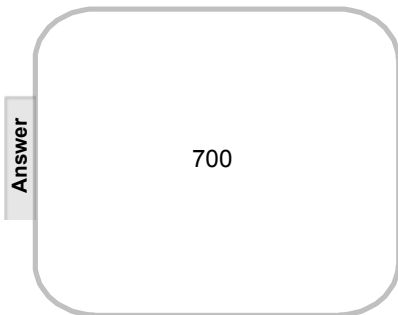
46 What is 263 rounded to the nearest hundred?

46 What is 263 rounded to the nearest hundred?



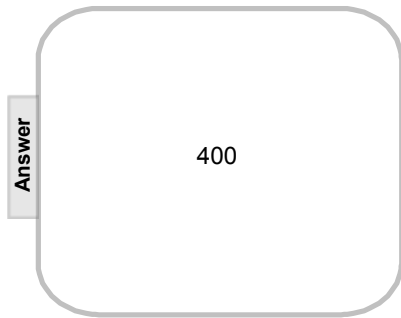
47 What is 665 rounded to the nearest hundred?

47 What is 665 rounded to the nearest hundred?



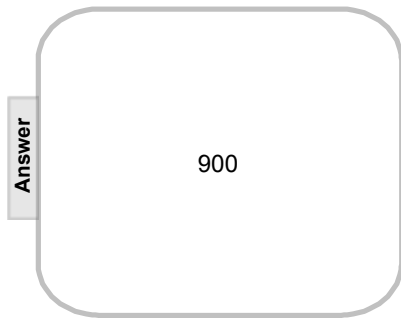
48 What is 421 rounded to the nearest hundred?

48 What is 421 rounded to the nearest hundred?



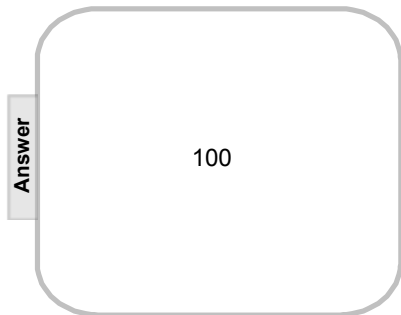
49 What is 870 rounded to the nearest hundred?

49 What is 870 rounded to the nearest hundred?



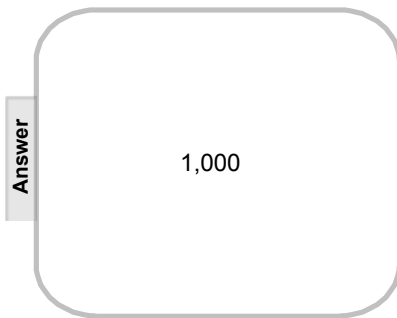
50 What is 149 rounded to the nearest hundred?

50 What is 149 rounded to the nearest hundred?




51 What is 975 rounded to the nearest hundred?

51 What is 975 rounded to the nearest hundred?




## More Rounding Practice


### Round 537 to the nearest ten.

- Put your pencil point under the digit in the tens place.  
Look to the right. 
- Is the digit 5 or more?  
Yes OR No
- What happens to the 3?  
Increases by 1 OR remains the same
- What happens to everything to the left of the tens place?  
Those digits always remain the same.
- Write the answer \_\_\_\_\_


### Round 413 to the nearest ten.

- Put your pencil point under the digit in the tens place.  
Look to the right. 
- Is the digit 5 or more?  
Yes OR No
- What happens to the 1?  
Increases by 1 OR remains the same
- What happens to everything to the left of the tens place?  
Those digits always remain the same.
- Write the answer \_\_\_\_\_

### Round 837 to the nearest hundred.

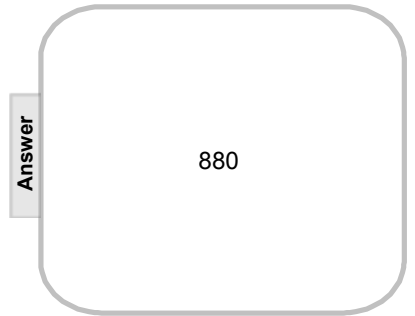
- Put your pencil point under the digit in the hundreds place.  
Look to the right. 
- Is the digit 5 or more?  
Yes OR No
- What happens to the 8?  
Increases by 1 OR remains the same
- What happens to everything to the left of the hundreds place?  
Those digits always remain the same.
- Write the answer \_\_\_\_\_

### Round 1,439 to the nearest hundred.

- Put your pencil point under the digit in the hundreds place.  
Look to the right. 
- Is the digit 5 or more?  
Yes OR No
- What happens to the 4?  
Increases by 1 OR remains the same
- What happens to everything to the left of the hundreds place?  
Those digits always remain the same.
- Write the answer \_\_\_\_\_

52 What is 875 rounded to the nearest ten?

52 What is 875 rounded to the nearest ten?



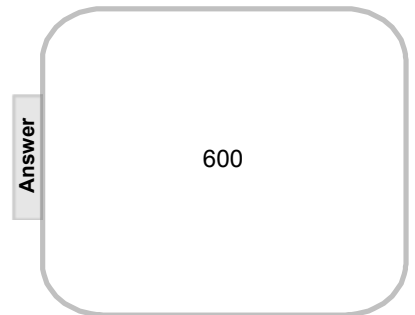
53 What is 329 rounded to the nearest ten?

53 What is 329 rounded to the nearest ten?



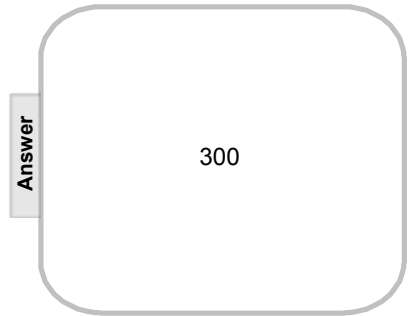
54 What is 629 rounded to the nearest hundred?

54 What is 629 rounded to the nearest hundred?



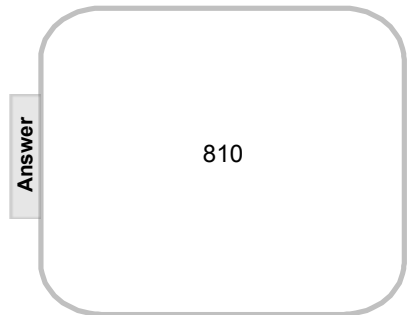
55 What is 321 rounded to the nearest hundred?

55 What is 321 rounded to the nearest hundred?



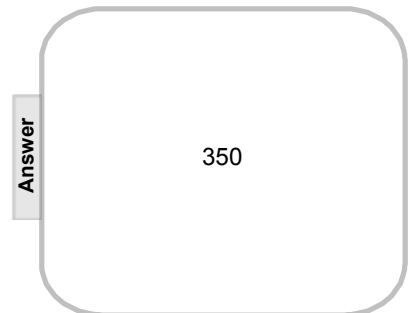
56 What is 806 rounded to the nearest ten?

56 What is 806 rounded to the nearest ten?



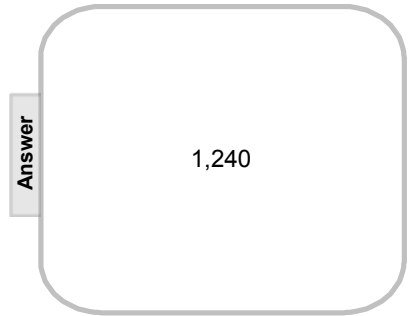
57 What is 348 rounded to the nearest ten?

57 What is 348 rounded to the nearest ten?



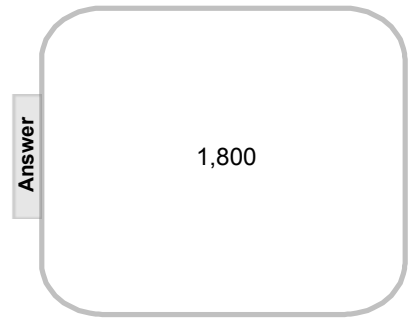
58 What is 1,242 rounded to the nearest ten?

58 What is 1,242 rounded to the nearest ten?



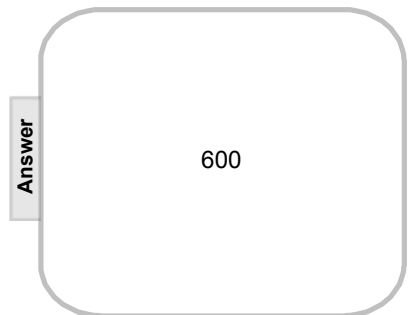
59 What is 1,818 rounded to the nearest hundred?

59 What is 1,818 rounded to the nearest hundred?



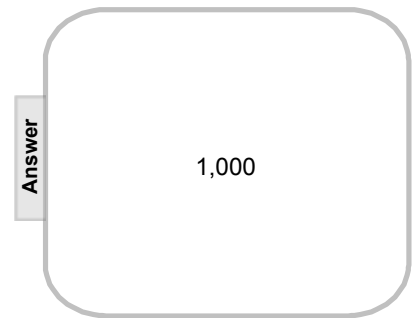
60 What is 608 rounded to the nearest hundred?

60 What is 608 rounded to the nearest hundred?



61 What is 971 rounded to the nearest hundred?

61 What is 971 rounded to the nearest hundred?



## Addition

[click to return to table of contents](#)

## Addition Table of Contents

- Addition Properties
- Missing Addends
- Estimate Sums
- Add 2 digit numbers
- Add 3 digit numbers
- Addition Story Problems

[click on the topic to go to that section](#)

## Addition Properties

[Click to Return to Addition Table of Contents](#)

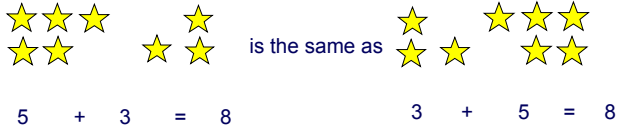
## Addition Properties

There are 3 properties of Addition

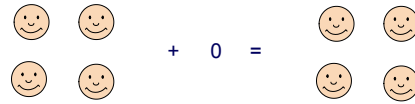
Commutative Property- You can add numbers in any order and get the same sum (answer).

Identity Property- You can add a zero to any number and the sum will equal the original number.

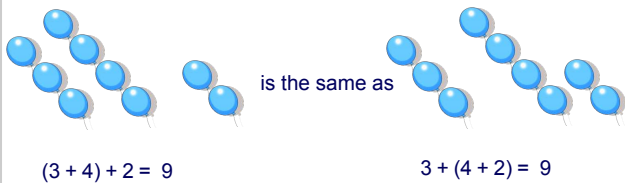
Associative Property- You can group the addends (numbers being added) in different ways and the sum will be the same.

**Commutative Property**

So,  
 $5 + 3 = 3 + 5$

**Identity Property**

So,  
 $4 + 0 = 4$

**Associative Property**

So,  
 $(3 + 4) + 2 = 3 + (4 + 2)$

**Addition Properties**

Place each number sentence under its correct property.

*Sorry, this element requires Flash, which is not currently supported in PDFs.*

*Please refer to the original Notebook file.*



62 An example of the Identity Property is  $0 = 7 + 0$ .

- True  
 False

62 An example of the Identity Property is  $0 = 7 + 0$ .

- True  
 False

Answer

False

63 Does  $8 + 4 = 4 + 8$ ?

- Yes  
 No

[click here for property](#)

63 Does  $8 + 4 = 4 + 8$ ?

- Yes  
 No

Answer

Yes

64 Which number sentence equals 15?

- A  $(3 + 5) + 7$   
 B  $3 + (5 + 7)$   
 C Both A and B

[click here for property](#)

64 Which number sentence equals 15?

- A  $(3 + 5) + 7$   
 B  $3 + (5 + 7)$   
 C Both A and B

Answer

C

65 What is the name of the property that allows  $23 + 0$  to equal 23?

- A Commutative  
 B Associative  
 C Identity  
 D All of the above

65 What is the name of the property that allows  $23 + 0$  to equal 23?

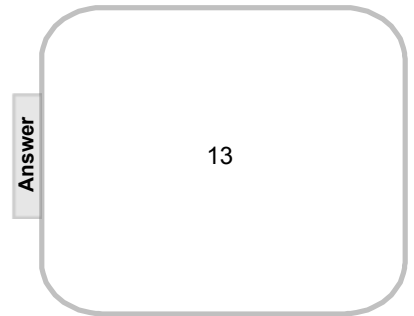
- A Commutative  
 B Associative  
 C Identity  
 D All of the above

Answer

C

66 What is the sum of  $(5 + 6) + 2$ ?

66 What is the sum of  $(5 + 6) + 2$ ?



## Missing Addends

Click to Return to  
Addition Table  
of Contents

## Missing Addends

In an addition equation such as  $5 + 6 = 11$ :

5 and 6 are called the addends and 11 is called the sum.

$$\begin{array}{ccccccc} & 5 & + & 6 & = & 11 & \\ & \nearrow & & \nearrow & & \nwarrow & \\ \text{addend} & & & \text{addend} & & \text{sum} & \end{array}$$

## Missing Addends

Sometimes we are given a problem with a missing addend.

$4 + ? = 6$

$12 = 9 + \blacksquare$

$\_ + 5 = 10$

$7 = a + 3$

We have to figure out the number that is missing.



## Missing Addends

Try to use addition facts

$7 + = 11 \quad \blacksquare$

Ask yourself, "What do I add to 7 to get the answer 11?"

**Missing Addends**

Try to use a subtraction fact

$$? + 8 = 12$$

Ask yourself, "What is the answer to 12 subtract 8?"

**Missing Addends**

Match the number sentence with its missing addend.

$$6 + ? = 9$$

7

$$x + 4 = 10$$

2

$$9 = ? + 4$$

3

$$7 = 5 + ?$$

6

$$5 + ? = 12$$

5

67 What is the missing addend?  $5 + \underline{\quad} = 11$

67 What is the missing addend?  $5 + \underline{\quad} = 11$

Answer

6

68 What is the missing addend?  $15 = \blacksquare + 9$

68 What is the missing addend?  $15 = \blacksquare + 9$

Answer

6

69 Is the missing addend 4 for this problem?

$$4 + a = 4$$

Yes

No

69 Is the missing addend 4 for this problem?

$$4 + a = 4$$

Yes

No

Answer

No

70 The same number can be used to fill both missing addend spaces. \_\_\_\_ + \_\_\_\_ = 14

True

False

70 The same number can be used to fill both missing addend spaces. \_\_\_\_ + \_\_\_\_ = 14

True

False

Answer

True

71 There are 16 seats on a roller coaster. If 10 of the seats are already filled, how many more seats can be filled?

A 26

B 6

C 10

D 16

71 There are 16 seats on a roller coaster. If 10 of the seats are already filled, how many more seats can be filled?

A 26

B 6

C 10

D 16

Answer

B

72 Enter your answer in the box.

$$512 + \boxed{\phantom{000}} = 568$$

From PARCC sample questions

72 Enter your answer in the box.

$$512 + \boxed{\phantom{000}} = 568$$

Answer

56

From PARCC sample questions

## Estimate Sums

Click to Return to  
Addition Table  
of Contents

## Estimating Sums

When you estimate sums, you round the numbers or use compatible numbers to find an estimate of what the sum may be before you add.

## Estimating Sums Using Rounding

Round each number to the nearest ten.  
Then add to find the estimated sum.

$$\begin{array}{r} 138 \rightarrow \\ +63 \rightarrow \\ \hline \end{array}$$

$$\begin{array}{r} 19 \rightarrow \\ +53 \rightarrow \\ \hline \end{array}$$

## Using compatible numbers

Find numbers that are close to the numbers you are working with.  
These numbers are called compatible numbers.

$$\begin{array}{r} 128 \rightarrow \\ +73 \rightarrow \\ \hline \end{array}$$

$$\begin{array}{r} 304 \rightarrow \\ +86 \rightarrow \\ \hline \end{array}$$

**Estimating Sums**

Click on button to play a Estimating Sums game!



73 When you need to estimate 256 while estimating sums, could you estimate it to 250?

- Yes  
 No

73 When you need to estimate 256 while estimating sums, could you estimate it to 250?

- Yes  
 No

Teacher Notes

**Yes**

Teachers, students should be estimating by rounding or using compatible numbers. The classroom dialogue may include many perspectives and methods for estimation. The point is for students to feel comfortable reaching an estimate rather than finding the actual answer.

74 The estimated sum of 24 and 15 is 50.

- True  
 False

74 The estimated sum of 24 and 15 is 50.

- True  
 False

Answer

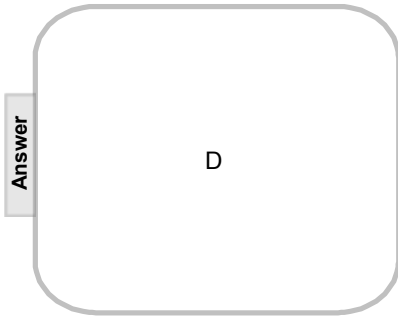
**False**

75 What is the estimated sum of  $745 + 45$ ?

- A 780  
 B 790  
 C 700  
 D 800

75 What is the estimated sum of  $745 + 45$ ?

- A 780
- B 790
- C 700
- D 800

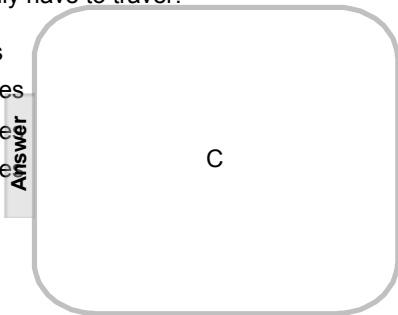


76 A family trip involved driving 731 miles to its first stop and 475 miles to its second. About how many miles did the family have to travel?

- A 200 miles
- B 1,000 miles
- C 1,200 miles
- D 2,000 miles

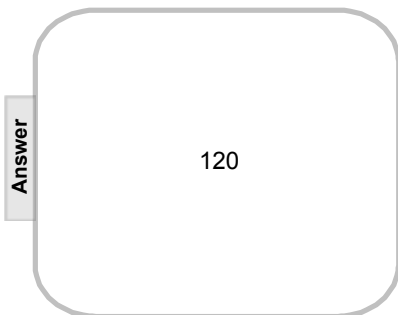
76 A family trip involved driving 731 miles to its first stop and 475 miles to its second. About how many miles did the family have to travel?

- A 200 miles
- B 1,000 miles
- C 1,200 miles
- D 2,000 miles



77 What is the estimated sum for  $45 + 68$ ?

77 What is the estimated sum for  $45 + 68$ ?



## Add 2-Digit Numbers

[Click to Return to  
Addition Table  
of Contents](#)

**Adding 2-Digit Numbers**

How to add two 2-digit numbers without regrouping.

For example,  $22 + 56$

You will first have to place the numbers on top of one another. Make sure to line up the place values.

$$\begin{array}{r} 22 \\ +56 \\ \hline \end{array}$$

Add the ones' place digits (  $2 + 6$  ). This sum is less than 9 so regrouping is not necessary. So place the 8 under the ones place.

Next, add the tens' place digits (  $2 + 5$  ). Place the 7 under the tens place.

**Adding 2-Digit Numbers**

How to add two 2-digit numbers with regrouping.

For example,  $38 + 55$

You will first have to place the numbers on top of one another. Make sure to line up the place values.

$$\begin{array}{r} 38 \\ +55 \\ \hline \end{array}$$

Add the ones' place digits (  $8 + 5$  ). This sum is more than 9 so you need to regroup. Place the 3 in the ones' place and the 1 in the tens place.

Next, add the tens' place digits (  $1 + 3 + 5$  ). Place the 9 under the tens place.

**Practice**

Practice with grid paper.

Use the boxes to help line up the numbers.

$42 + 17$

$36 + 49$

**Practice**

Click the button to play a addition game.

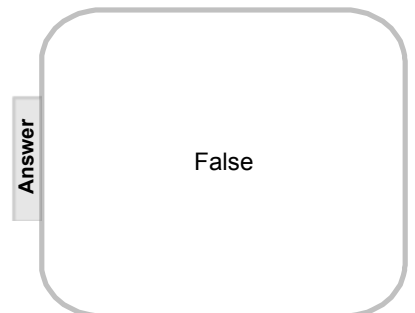


78 The sum of  $15 + 56$  is 70.

- True  
 False

78 The sum of  $15 + 56$  is 70.

- True  
 False

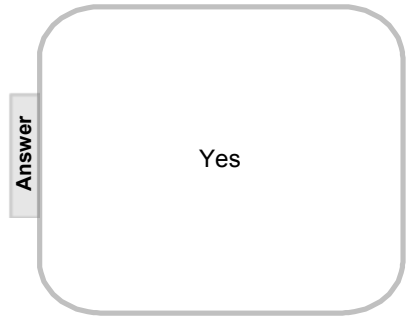


79 Is 36 the sum of  $18 + 18$ ?

- Yes  
 No

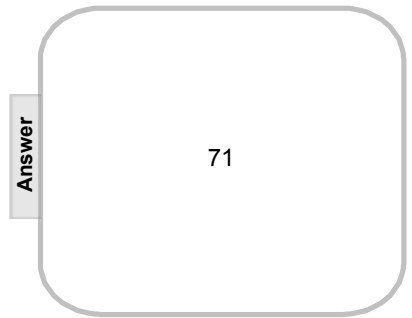
79 Is 36 the sum of  $18 + 18$ ?

- Yes  
 No



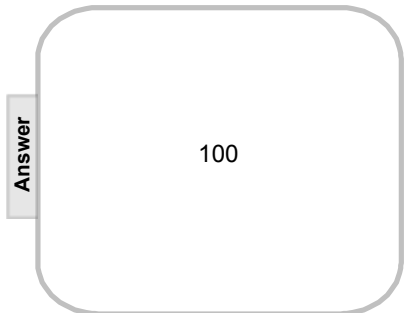
80 What is the sum?  $42 + 29 = \underline{\quad}$

80 What is the sum?  $42 + 29 = \underline{\quad}$



81 What is the sum?  $\underline{\quad} = 75 + 25$

81 What is the sum?  $\underline{\quad} = 75 + 25$



82 What is the sum?  $23 + 42 = \underline{\quad}$

82 What is the sum?  $23 + 42 = \underline{\quad}$

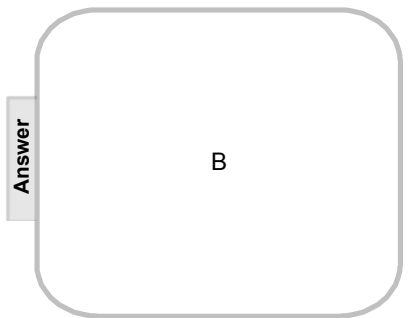


83 Which is the sum?  $45 + 54 + 23 = \underline{\quad}$

- A 99
- B 122
- C 75
- D 125

83 Which is the sum?  $45 + 54 + 23 = \underline{\quad}$

- A 99
- B 122
- C 75
- D 125



84 What is the sum?  $23 + 56 + 13 = \underline{\quad}$

84 What is the sum?  $23 + 56 + 13 = \underline{\quad}$



## Add 3-Digit Numbers

Click to Return to  
Addition Table  
of Contents

## Adding 3-Digit Numbers

To add two 3-digit numbers, place one 3-digit number on top of the other 3-digit number.

For example,  $462 + 557$  becomes:

$$\begin{array}{r} 462 \\ +557 \\ \hline \end{array}$$

Remember to:

Make sure to line up the digits based on their place values.

Add the ones' digit place first. If the sum is less than 9, no regrouping is necessary.

Next, add the tens' place. If the sum is greater than 9, you will need to regroup and place a 1 on the hundreds place.

## Adding 3-Digit Numbers

Find each sum. Pop the balloon to see if you are correct.

Sorry, this element requires Flash, which is not currently supported in PDFs.

Please refer to the original notebook file.

883



Sorry, this element requires Flash, which is not currently supported in PDFs.

Please refer to the original notebook file.

1,136



Sorry, this element requires Flash, which is not currently supported in PDFs.

Please refer to the original notebook file.

1,010



## Adding 3-Digit Numbers

Solve each problem. Pass the magnifying glass over to see if you are correct.

$195 + 461 =$

$562 + 852 =$

$159 + 534 =$

$724 + 268 =$

$982 + 644 =$

$756 + 821 =$

$654 + 987 =$

$597 + 157 =$

$365 + 482 =$

$495 + 571 =$

$625 + 274 =$

$856 + 111 =$

$421 + 685 =$

$165 + 791 =$



## Adding 3-Digit Numbers

Solve each problem. Pass the magnifying glass over to see if you are correct.

$195 + 461 =$

$159 + 534 =$

$982 + 644 =$

$654 + 987 =$

$365 + 482 =$

$625 + 274 =$

$421 + 685 =$

**Teacher Notes**  
Teachers, students could team up with a partner to answer one side and check the partner's math on the other side. Another option might be to have half the class do one side and half the class do the other side. Choose students at random to help explain how they answered.



$165 + 791 =$

## Adding 3-Digit Numbers

Click on the button to model addition with base ten blocks.



85 The sum of  $511 + 215$  is 726.

- True
- False

85 The sum of  $511 + 215$  is 726.

- True
- False

Answer

True

86 Can the sum of two 3-digit numbers equal a 4-digit number?

- Yes
- No

86 Can the sum of two 3-digit numbers equal a 4-digit number?

- Yes
- No

Answer

Yes

87 Find the sum of  $123 + 321 = ?$

- A 1,234
- B 444
- C 246
- D 66

87 Find the sum of  $123 + 321 = ?$

- A 1,234
- B 444
- C 246
- D 66

Answer

B

88 Find the sum of  $556 + 654$ .

88 Find the sum of  $556 + 654$ .

Answer

1,210

89 What is the sum of  $262 + 353$ ?

89 What is the sum of  $262 + 353$ ?

Answer

615

90 A sporting goods store sold 159 baseballs and 354 golf balls last month. How many balls did the store sell last month in all?

90 A sporting goods store sold 159 baseballs and 354 golf balls last month. How many balls did the store sell last month in all?

Answer

513

91 Enter your answer in the box.

$$512 + \boxed{\phantom{000}} = 568$$

From EOY PARCC sample test #34

91 Enter your answer in the box.

$$512 + \boxed{\phantom{000}} = 568$$

Answer

56

From EOY PARCC sample test #34

92 Which expression could be used to find the value of  $465 + 229$ ?

- A  $4 + 2 + 6 + 2 + 5 + 9$
- B  $40 + 20 + 60 + 20 + 5 + 9$
- C  $400 + 200 + 6 + 2 + 5 + 9$
- D  $400 + 200 + 60 + 20 + 5 + 9$

From EOY PARCC sample test #38

92 Which expression could be used to find the value of  $465 + 229$ ?

- A  $4 + 2 + 6 + 2 + 5 + 9$
- B  $40 + 20 + 60 + 20 + 5 + 9$
- C  $400 + 200 + 6 + 2 + 5 + 9$
- D  $400 + 200 + 60 + 20 + 5 + 9$

Answer

D

From EOY PARCC sample test #38

## Addition Story Problems

Click to Return to  
Addition Table  
of Contents

## Addition Story Problems

When solving story problems, make sure you read the entire problem.

You may have to reread the problems to make sure you understand what it is asking you.

Be careful of "invisible" numbers. Words like week, dozen, double, etc. can stand for numbers.

A number sentence can also be called an expression or an equation. It is showing how you did the math using numbers and math symbols. For example, if I solved a problem by adding 64 and 18 my number sentence would be:

$$64 + 18 = 82$$

**Addition Story Problems**

Two turtles laid eggs on the beach. One laid 151 eggs and the other laid 206 eggs. How many eggs were there in all?

What is the number sentence?

**Addition Story Problems**

A school placed an order for 500 pencils and 700 colored pencils. How many pencils were ordered in all?

Number sentence:

**Addition Story Problems**

There are 365 days in a year. How many days are in two years?

Number sentence:

**Addition Story Problems**

A farmer planted 120 tomato seeds and 56 pepper seeds. How many plants were planted in all?

Number sentence:

**Addition Story Problems**

On the way to her birthday party, Mara dropped 1 box of a dozen cupcakes. She still had two more boxes. How many cupcakes does she still have?

Number Sentence:

**Math Game**

Click the baseball to play Grand Slam Math.



93 Jason read 45 pages on Monday night and 26 pages on Tuesday night. He read a total of 71 pages.

- True  
 False

93 Jason read 45 pages on Monday night and 26 pages on Tuesday night. He read a total of 71 pages.

- True  
 False

Answer

True

94 The second grade collected 243 bottle caps and the third grade collected 534. Did they collect more than 800 caps?

- Yes  
 No

94 The second grade collected 243 bottle caps and the third grade collected 534. Did they collect more than 800 caps?

- Yes  
 No

Answer

No

95 Gavin had \$300 in his bank account. His grandmother deposited \$150. How much does he have now?

- A \$150  
 B \$550  
 C \$450  
 D \$250

95 Gavin had \$300 in his bank account. His grandmother deposited \$150. How much does he have now?

- A \$150  
 B \$550  
 C \$450  
 D \$250

Answer

C

96 We have to drive 48 miles to reach Philadelphia, PA.  
How many miles will we have traveled there and back?

96 We have to drive 48 miles to reach Philadelphia, PA.  
How many miles will we have traveled there and back?

Answer

96 miles

97 How many feet of wood would be needed to finish a  
276 foot long bridge, if 155 feet has already been  
completed?

97 How many feet of wood would be needed to finish a  
276 foot long bridge, if 155 feet has already been  
completed?

Answer

121 feet

98 Kevin makes muffins.  
- It takes 8 minutes to mix the batter.  
- The muffins bake for 17 minutes.  
- The muffins then cool for 5 minutes.

What is the total amount of time, in minutes, Kevin  
spends mixing, baking, and cooling the muffins?

From EOY PARCC sample test #1

98 Kevin makes muffins.  
- It takes 8 minutes to mix the batter.  
- The muffins bake for 17 minutes.  
- The muffins then cool for 5 minutes.

What is the total amount of time, in minutes, Kevin  
spends mixing, baking, and cooling the muffins?

Answer

30 minutes

From EOY PARCC sample test #1

## Subtraction

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## Subtraction Table of Contents

Estimate Differences

2-Digit Subtraction

3-Digit Subtraction

Subtraction Across Zeros

Checking Subtraction with Addition

click on the topic to go  
to that section

## Estimate Differences

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of Contents

## Estimating Differences

When you estimate differences, you round the numbers or use compatible numbers to find an estimate of what the difference may be before you subtract.

## Using Rounding

Round each number to the nearest ten.  
Then add to find the estimated difference.

*click*

$$\begin{array}{r} 138 \rightarrow \\ -63 \rightarrow \\ \hline \end{array}$$

*click*

$$\begin{array}{r} 53 \rightarrow \\ -19 \rightarrow \\ \hline \end{array}$$

## Using Compatible Numbers

Find numbers that are close to the numbers you are working with. These numbers are called compatible numbers.

*click*

$$\begin{array}{r} 174 \rightarrow \\ -28 \rightarrow \\ \hline \end{array}$$

*click*

$$\begin{array}{r} 304 \rightarrow \\ -86 \rightarrow \\ \hline \end{array}$$

**Estimating Differences**

Click on button to play a Estimating Differences game!

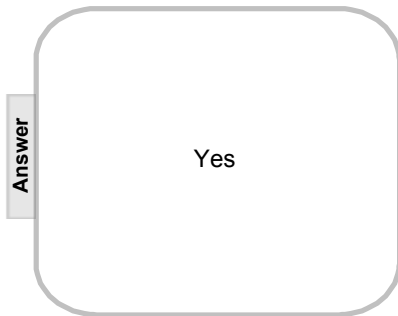


99 When you need to estimate 256 while estimating differences, could you estimate it to 250?

- Yes  
 No

99 When you need to estimate 256 while estimating differences, could you estimate it to 250?

- Yes  
 No

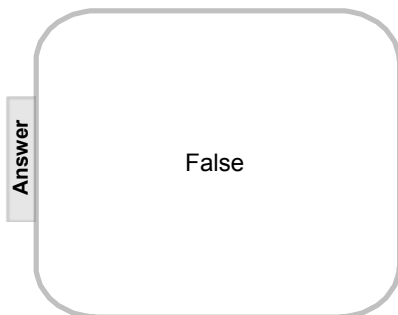


100 The estimated difference of 74 and 26 is 50.

- True  
 False

100 The estimated difference of 74 and 26 is 50.

- True  
 False



101 What is the estimated difference of 745 - 46?

- A 780  
 B 790  
 C 700  
 D 800

101 What is the estimated difference of  $745 - 46$ ?

- A 780
- B 790
- C 700
- D 800

Answer

C

102 A family trip involved driving 731 miles. They have already traveled 475 miles. About how many more miles did the family have to travel?

- A 200 miles
- B 1,000 miles
- C 1,200 miles
- D 2,000 miles

102 A family trip involved driving 731 miles. They have already traveled 475 miles. About how many more miles did the family have to travel?

- A 200 miles
- B 1,000 miles
- C 1,200 miles
- D 2,000 miles

Answer

A

103 What is the estimated difference for  $68 - 45$ ?

103 What is the estimated difference for  $68 - 45$ ?

Answer

20

## 2-Digit Subtraction

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## 2-Digit Subtraction

2-digit Subtraction without regrouping

When you subtract two 2-digit numbers, it is important to line up the digits based on their place values.

For example,  $45 - 14 =$  should be written as:

$$\begin{array}{r} 45 \\ - 14 \\ \hline \end{array}$$

First, subtract the ones' column. 5 is greater than 4, so regrouping is not needed.

Then, subtract the tens' column.

## 2-Digit Subtraction

2 digit Subtraction with Regrouping

When you subtract two 2-digit numbers, it is important to line up the digits based on their place values.

For example,  $54 - 26 =$  should be written as:

$$\begin{array}{r} 54 \\ - 26 \\ \hline \end{array}$$

First, subtract the ones' column. 4 is less than 6, so regrouping is needed. Take away one of the tens, so 5 tens becomes 4 tens.

Add that extra 10 to the ones column, so  $4 + 10 = 14$ . Now you can subtract the  $14 - 6$  in the ones column.

Then, subtract the tens' column.

## 2-Digit Subtraction

Use base ten blocks to model subtraction.



## 2-Digit Subtraction

Sorry, this element requires Flash, which is not currently supported in PDFs.

Please refer to the original Notebook file.



## 2-Digit Subtraction Game

Click button to play a subtraction game.

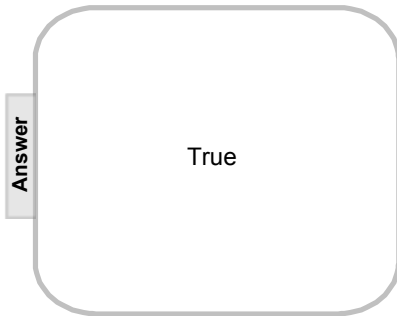


104  $61 - 16$  needs to be regrouped.

- True
- False

104) 61 - 16 needs to be regrouped.

- True  
 False

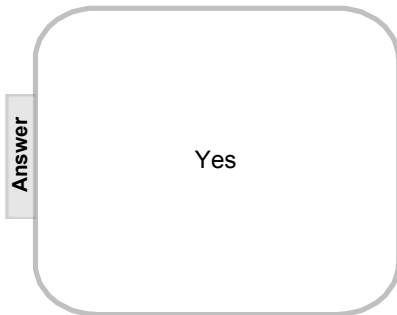


105 The difference of 46 and 21 is 25?

- Yes  
 No

105 The difference of 46 and 21 is 25?

- Yes  
 No



106 What is 77- 19?

106 What is 77- 19?



107 What is the estimated and actual difference of 46 - 23?

- A 20 and 23  
 B 30 and 69  
 C 30 and 32  
 D 30 and 23

107 What is the estimated and actual difference of  $46 - 23$ ?

- A 20 and 23  
 B 30 and 69  
 C 30 and 32  
 D 30 and 23

Answer

D

108 Samantha sold 89 shirts. She has delivered 24 of them. How many does she still have to deliver?

108 Samantha sold 89 shirts. She has delivered 24 of them. How many does she still have to deliver?

Answer

65

## 3-Digit Subtraction

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Contents

### 3-Digit Subtraction

When finding the difference of two 3-digit numbers, you must make sure the digits are lined up based on their place value.

For example,  $574 - 159$  should be written as:

$$\begin{array}{r} 574 \\ -159 \\ \hline \end{array}$$

Find the difference in the ones' column. 4 is not larger than 9, therefore we need to regroup.

Find the difference in the tens' column. 6 is larger than 5, therefore we do not need to regroup.

Find the difference in the hundreds' column.

### 3-Digit Subtraction

Click the button to model 3-digit subtraction using base ten blocks.



**3-Digit Subtraction**

Click on the button to play a 3- digit subtraction game.

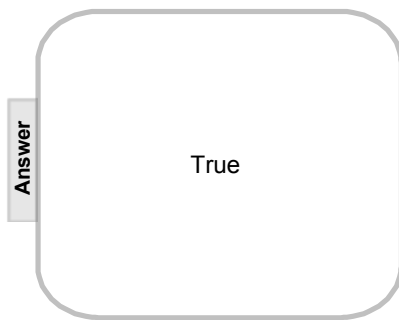


109 309-281 needs to be regrouped?

- True  
 False

109 309-281 needs to be regrouped?

- True  
 False

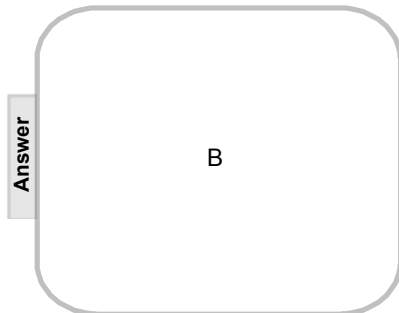


110 What is the estimated difference of 782 - 126?

- A 600  
 B 650  
 C 606  
 D 60

110 What is the estimated difference of 782 - 126?

- A 600  
 B 650  
 C 606  
 D 60

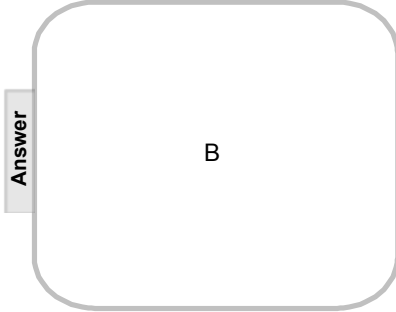


111 What is the difference of 782 - 126?

- A 606  
 B 656  
 C 664

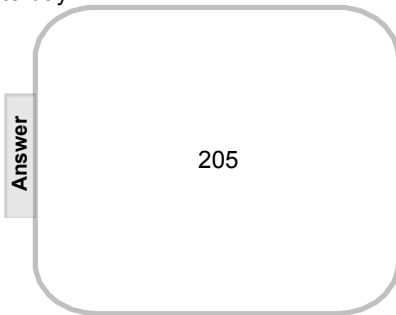
111 What is the difference of  $782 - 126$ ?

- A 606  
 B 656  
 C 664



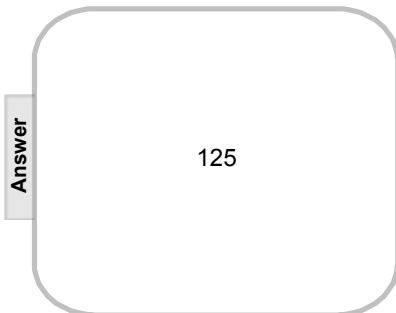
112 Yesterday, 915 people went to the zoo. Today, only 710 came. How many more people visited yesterday?

112 Yesterday, 915 people went to the zoo. Today, only 710 came. How many more people visited yesterday?



113 What is the difference of 150 and 25?

113 What is the difference of 150 and 25?



114 Carla buys apples and peaches at the store. The mass of the apples is 724 grams and the mass of the peaches is 471 grams.

How much greater is the mass of the apples than the mass of the peaches?

\_\_\_\_\_ grams

114 Carla buys apples and peaches at the store. The mass of the apples is 724 grams and the mass of the peaches is 471 grams.

How much greater is the mass of the apples than the mass of the peaches?

Answer

253

From EOY PARCC sample test #26

115

$$746 - 397 = ?$$

From EOY PARCC sample test #14

115

$$746 - 397 = ?$$

Answer

349

From EOY PARCC sample test #14

## Subtraction Across Zeroes

[Click to Return to Subtraction Table of Contents](#)

### Subtraction Across Zeroes

An example of "Subtracting Across Zeroes" is the problem, 500-159.

When this problem is written with its digits lined up based on their place values, it looks like:

$$\begin{array}{r} 500 \\ -159 \\ \hline \end{array}$$

First, look at the numbers in the ones' column. 0 is not larger than 9, so regrouping is needed.

However, we cannot regroup the tens' column because it, too, has a zero on top.

So we then must regroup the hundreds' column.

### Subtraction Across Zeroes

$$\begin{array}{r} 4 \\ \cancel{5}00 \\ -159 \\ \hline \end{array}$$

Regroup the hundreds' column by crossing out the 5 and making it a

4. Then, make the tens' column 0 a 10.

$$\begin{array}{r} 4_{10} \\ \cancel{5}00 \\ -159 \\ \hline \end{array}$$

Regroup the tens' column by crossing out the 10 and making it a 9.

Then make the ones' column 0 a 10.

$$\begin{array}{r} 9 \\ 4_{\cancel{10}} \\ \cancel{5}00 \\ -159 \\ \hline \end{array}$$

**Subtraction Across Zeroes**

Can you remember the order of subtracting across the zeroes? Drag the sentences to show the order.

$$400 - 389 = ?$$

1. Regroup 1 hundred from the 4, change it to a 3.
2. Now, the zero in the tens place can become a 10.
3. Now, the zero in the ones place can become a 10.
4. Regroup from the tens place so 10 becomes a 9.
5. Subtract 10 - 9 in the ones place, then 9 - 8 in the tens place, and last 3 - 3 in the hundreds place.
6. Decide if you need to regroup.

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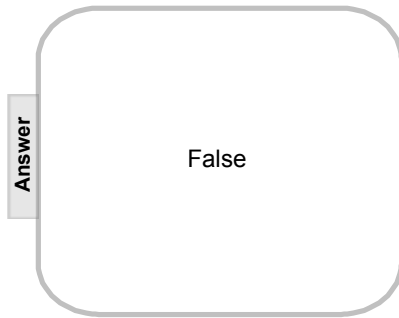
116 The difference of 800 and 423 is 423?

- True  
 False

Slide 233 / 268

116 The difference of 800 and 423 is 423?

- True  
 False



Slide 233 (Answer) / 268

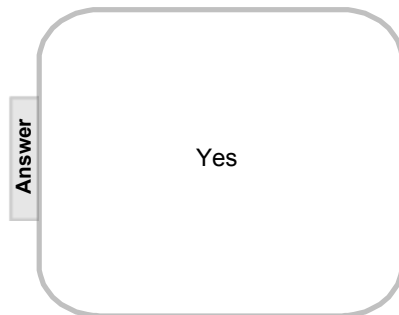
117 Could you check your answer to a subtraction problem with addition?

- Yes  
 No

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117 Could you check your answer to a subtraction problem with addition?

- Yes  
 No



118 Which number will make the number sentence true?  
 $600 - 253 = \underline{\quad}$

- A 453  
 B 457  
 C 853  
 D 347

118 Which number will make the number sentence true?

$$600 - 253 = \underline{\quad}$$

- A 453  
 B 457  
 C 853  
 D 347

Answer

D

119 What is the difference of 800 and 799?

119 What is the difference of 800 and 799?

Answer

1

120 Sarah needs 500 tickets to get a prize at the arcade. She has already received 161 tickets from playing her favorite games. How many more tickets does she need?

120 Sarah needs 500 tickets to get a prize at the arcade. She has already received 161 tickets from playing her favorite games. How many more tickets does she need?

Answer

339 tickets

## Checking Subtraction with Addition

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## Checking Subtraction with Addition

Sometimes, mistakes are made when we subtract. Estimating is one way to check the reasonableness of our work. But, we can also use addition to check our subtraction.

You already know that you can use fact families. For example, the subtraction problem  $9-5=4$  can be checked with the addition problem  $4+5=9$ . The same can be done with larger numbers.

## Checking Subtraction with Addition

When checking a subtraction problem with addition, add the number that is subtracted and the answer. You should end up with the original number you started with.

$$\begin{array}{r} 45 \\ -12 \\ \hline 33 \end{array} \begin{array}{l} \text{-----} \rightarrow 12 \\ \text{-----} \rightarrow +33 \\ \hline 45 \end{array}$$

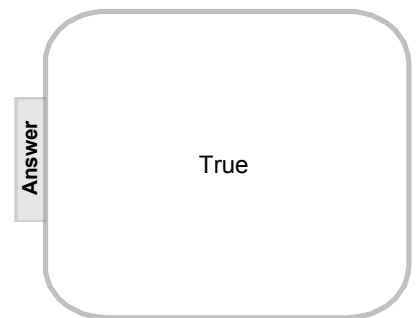
$$\begin{array}{r} 451 \\ -122 \\ \hline 329 \end{array} \begin{array}{l} \text{-----} \rightarrow 122 \\ \text{-----} \rightarrow +329 \\ \hline 451 \end{array}$$

121 You can check a difference with a related sum?

- True  
 False

121 You can check a difference with a related sum?

- True  
 False

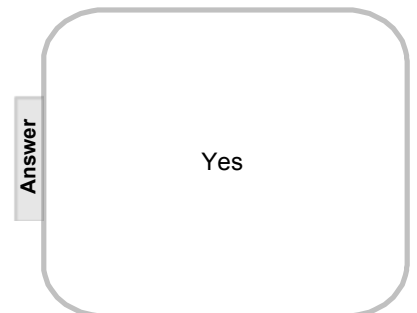


122 Would you use  $15 + 37 = 52$  to check  $52 - 15 = 37$ ?

- Yes  
 No

122 Would you use  $15 + 37 = 52$  to check  $52 - 15 = 37$ ?

- Yes  
 No



123  $426 - 126 = 300$  can be checked with  $126 + 300 = 426$ . Do you agree?

- Yes  
 No

123  $426 - 126 = 300$  can be checked with  $126 + 300 = 426$ . Do you agree?

- Yes  
 No

Answer

Yes

124 What number sentence would you use to check your answer to  $354 - 194 = 160$ ?

- A  $354 + 194 = 160$   
 B  $194 - 354 = 160$   
 C  $160 + 354 = 194$   
 D  $194 + 160 = 354$

124 What number sentence would you use to check your answer to  $354 - 194 = 160$ ?

- A  $354 + 194 = 160$   
 B  $194 - 354 = 160$   
 C  $160 + 354 = 194$   
 D  $194 + 160 = 354$

Answer

D

125 When checking the subtraction problem,  $365 - 65 = 300$ , what number could you write first in your addition problem?

125 When checking the subtraction problem,  $365 - 65 = 300$ , what number could you write first in your addition problem?

Answer

300 or 65

## Solving 2 Step Word Problems

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## Solving 2 Step Word Problems

Sometimes, you have a story problem that requires more than one step. Take a look at the problem below.

Jenna and Matthew were adding pencils to their collections. Find how many they collected in the chart. How many more pencils does Jenna have than Matthew after both days?

Pencils Collected	Jenna	Matthew
Day 1	18	11
Day 2	24	16

## Solving 2 Step Word Problems

Pencils Collected	Jenna	Matthew
Day 1	18	11
Day 2	24	16

To begin, we must find out how many they each have total before we can find the difference.

Add.

Jenna has  $18 + 24 = 42$

Matthew has  $11 + 16 = 27$

Now, we can find the difference.  $42 - 27 = 15$

Jenna has 15 more pencils in her collection than Matthew.

126 Todd and Amy are competing to see how many pushups they can complete. Looking at the chart below, after both days of the competition, how many more pushups has Todd completed than Amy?

push ups completed	Todd	Amy
Day 1	29	19
Day 2	34	16

Answer

127 "Ashley bought balloons for the birthday party. She purchased 28 balloons in all. 5 were pink, 6 were yellow, and 8 were green. How many blue balloons must there have been?" This is a 2-step question.

- True  
 False

127 "Ashley bought balloons for the birthday party. She purchased 28 balloons in all. 5 were pink, 6 were yellow, and 8 were green. How many blue balloons must there have been?" This is a

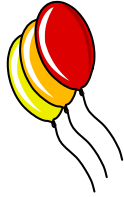
- True  
 False

Answer

True

128 Now, solve.

Ashley bought balloons for the birthday party. She purchased 28 balloons in all. 5 were pink, 6 were yellow, and 8 were green. How many blue balloons must there have been?



128 Now, solve.

Ashley bought balloons for the birthday party. She purchased 28 balloons in all. 5 were pink, 6 were yellow, and 8 were green. How many blue balloons must there have been?

Answer

9 blue balloons

129 Adam brought snacks to the pool. In all, he brought 24 pieces of fruit. He brought 6 apples and 7 peaches. How many bananas must he have brought?

- A 12 bananas
- B 24 bananas
- C 11 bananas
- D 8 bananas

129 Adam brought snacks to the pool. In all, he brought 24 pieces of fruit. He brought 6 apples and 7 peaches. How many bananas must he have brought?

- A 12 bananas
- B 24 bananas
- C 11 bananas
- D 8 bananas

Answer

C

130 Molly and her sister Olivia went on a road trip. See the chart to show how many miles they each drove. How many more miles did Molly drive than Olivia?

Road Trip	Molly	Olivia
Saturday	442	212
Sunday	358	171

Answer

131 Pablo goes to a stamp show where he can share, buy and sell stamps.

The first day, Pablo starts with 744 stamps. He buys 27 stamps from his friend. He then sells 139 stamps. What is the total number of stamps that Pablo has after the first day?

Slide 253 (Answer) / 268

131 Pablo goes to a stamp show where he can share, buy and sell stamps.  
The first day, Pablo starts with 744 stamps. He buys 27 stamps from his friend. The second day, Pablo sells 139 stamps. What is the total number of stamps Pablo has after the second day?

Answer

632 stamps

From EOY PARCC sample test #11

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132 Part A

A library has 126 books about trees. The library has 48 fewer books about rivers than about trees. Select from the choices to correctly complete the statement. The number of books the library has about rivers is \_\_\_\_ and the total number of books the library has about trees and rivers is \_\_\_\_.

- |                              |                              |
|------------------------------|------------------------------|
| <input type="checkbox"/> 48  | <input type="checkbox"/> 174 |
| <input type="checkbox"/> 78  | <input type="checkbox"/> 204 |
| <input type="checkbox"/> 174 | <input type="checkbox"/> 300 |

From EOY PARCC sample test #24

Slide 254 (Answer) / 268

132 Part A

A library has 126 books about trees. The library has 48 fewer books about rivers than about trees. Select from the choices to correctly complete the statement. The number of books the library has about rivers is \_\_\_\_ and the total number of books the library has about trees and rivers is \_\_\_\_.

Teacher Notes

B 78  
E 204

Students should pick one answer from the blue choices and one answer from the red choices. This question is modeling the drop-down menu question students will see on the PARCC.

- |                              |                              |
|------------------------------|------------------------------|
| <input type="checkbox"/> 48  | <input type="checkbox"/> 300 |
| <input type="checkbox"/> 78  |                              |
| <input type="checkbox"/> 174 |                              |

From EOY PARCC sample test #24

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133 This library still has 126 books about trees. Two students borrow books about trees. Each student borrows 8 books. How many books about trees remain in the library?

From EOY PARCC sample test #24

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133 This library still has 126 books about trees. Two students borrow books about trees. Each student borrows 8 books. How many books about trees remain in the library?

Answer

110

From EOY PARCC sample test #24

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134 Third-grade students took a total of 1,000 pictures for the yearbook during the school year.

- Ted took 72 pictures.
- Mary took 48 pictures.

Part A

What is the total number of pictures taken by the rest of the third-grade students during the school year?

From PBA PARCC sample test #3

- 134 Third-grade students took a total of 1,000 pictures for the yearbook during the school year.
- Ted took 72 pictures.
  - Mary took 48 pictures.

Part A

What is the total number of pictures taken by Ted and Mary?

Answer

880 pictures

From PBA PARCC sample test #3

- 135 Third-grade students took a total of 1,000 pictures for the yearbook during the school year.
- Ted took 72 pictures.
  - Mary took 48 pictures.

Part B

Ella took 8 more pictures than Ted took. How many more pictures did Ella take than Mary?

From PARCC PBA sample test #3

- 135 Third-grade students took a total of 1,000 pictures for the yearbook during the school year.
- Ted took 72 pictures.
  - Mary took 48 pictures.

Part B

Ella took 8 more pictures than Ted took. How many more pictures did Ella take than Mary?

Answer

32 pictures

From PARCC PBA sample test #3

136 Part A

Nolan has 16 pennies in one jar and 94 pennies in another jar.

He uses some of the pennies to buy a pencil that costs 25 cents. What is the total number of pennies Nolan has left after he buys the pencil. Show your work.

From PBA PARCC sample test #15

136 Part A

Nolan has 16 pennies in one jar and 94 pennies in another jar.

He uses some of the pennies to buy a pencil that costs 25 cents. What is the total number of pennies Nolan has left after he buys the pencil. Show your work.

Answer

85 pennies

From PBA PARCC sample test #15

137 Part B

Nolan saves some more pennies and now has 187 pennies all in one jar. He finds 10 more in his pocket. What is the total number of pennies Nolan has after he adds the 10 pennies from his pocket to the jar?

From PBA PARCC sample test #15

137 Part B

Nolan saves some more pennies and now has 187 pennies all in one jar. He finds 10 more in his pocket. What is the total number of pennies Nolan has now? He adds the 10 pennies to the jar.

Answer

197 pennies

From PBA PARCC sample test #15

138 Part C

The table shows the number of pennies Nolan saved each week for four weeks.

Pennies Saved Each Week

Week	Number of Pennies
Week 1	18
Week 2	40
Week 3	32
Week 4	25

What is the total number of pennies Nolan saves during the four weeks? Show your work.

From PARCC sample test

138 Part C

The table shows the number of pennies Nolan saved each week for four weeks.

Pennies Saved Each Week

Week	Number of Pennies
Week 1	18
Week 2	40
Week 3	32
Week 4	25

Answer

115 pennies

From PARCC sample test

## Patterns

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## Patterns

Many times we can use patterns to help us solve addition and subtraction problems.

Often, patterns are identified in a table by sharing the rule.

Rule: Add 3

16	19
13	16
11	14
9	12
4	7



Each time we move from the left side of the table, to the right, we add three.

## Patterns

Other times, we identify a pattern by counting up by a common number. For example, if you were counting up by 5's you would say 5, 10, 15, 20... and so on.

Using this pattern, you could find out what would come next after 85 by thinking  $85 + 5 = 90$ .

## Slide 264 / 268

139 In the table below, what is the rule?

- A add 4
- B subtract 4
- C add 6
- D subtract 6

15	21
4	10
14	20
30	36
12	18

Answer

## Slide 265 / 268

140 If the rule is subtract 5, what would go in the empty box?

20	15
12	?

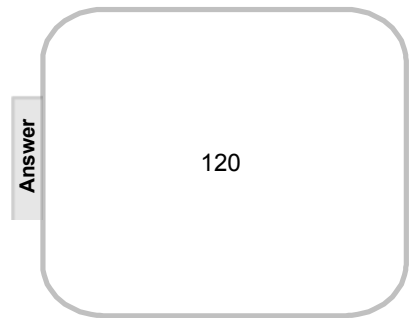
Answer

## Slide 266 / 268

141 Counting by 10s, what number would come after 110?

## Slide 266 (Answer) / 268

141 Counting by 10s, what number would come after 110?



## Slide 267 / 268

142 The rule is - 20.

- True
- False

70	50
30	10
46	26
100	80
21	1

Answer

## Slide 268 / 268

143 Edgar is counting up by 20s from 24. He says, "24, 44, 64, 84, 104..." What number would he say next?

143 Edgar is counting up by 20s from 24. He says, "24, 44, 64, 84, 104..." What number would he say next?

