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Verified by: Dr. Ibrahim Nofal

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Place Value Through Hundred Thousands

Write each number in three other ways.

267 thousand, 613

Word form: two hundred sixty-seven thousand, six hundred and thirteen.

Expanded form: $200,000 + 60,000 + 7,000 + 600 + 10 + 3$

Standard form: 267, 613

425,718

$700,000 + 60,000 + 1,000$
 $+ 200 + 30 + 5$

Write the value of the coloured digit.

87,**5**38

66,424

815,**6**32

Find each missing number.

$$9,000 + \square + 201 = 9,621$$

$$\square + 5,000 + 600 + 70 + 9 = 15,679$$

$$400,000 + 30,000 + 6,000 + 800 + \square + 3 = 436,873$$

Think

What is the value of the digit in the hundred thousands place in the number 129,563 ?

How Big Is One Million?

Use the chart to answer the following questions.

$1 \times 1,000,000 = 1,000,000$	→	1 time 1 million = 1 million
$10 \times 100,000 = 1,000,000$	→	10 times 1 hundred thousand = 1 million
$100 \times 10,000 = 1,000,000$	→	100 times 10 thousand = 1 million
$1,000 \times 1,000 = 1,000,000$	→	1,000 times 1 thousand = 1 million
$10,000 \times 100 = 1,000,000$	→	10,000 times 1 hundred = 1 million
$100,000 \times 10 = 1,000,000$	→	100,000 times ten = 1 million
$1,000,000 \times 1 = 1,000,000$	→	1,000,000 times 1 = 1 million

How many tens are in 1,000,000 ?

Chart shows 100,000 times ten = 1 million.

There are 100,000 tens in 1,000,000.

How many ones are there in 1,000,000 ? _____

How many hundred thousands are in 1,000,000 ? _____

How many thousands are there in 1,000,000 ? _____

Use the chart to complete these problems.

$$1,000 \times \boxed{} = 1,000,000$$

$$10 \times \boxed{} = 1,000,000$$

$$100 \times \boxed{} = 1,000,000$$

Place Value Through Hundred Millions

Here are four ways to write the same number.

Standard form: 425, 451, 760

Word form: four hundred twenty-five million, four hundred fifty one thousand, seven hundred and sixty.

Short word form: 425 million, 541 thousand, 670

Expanded form: $400,000,000 + 20,000,000 + 5,000,000 + 400,000 + 50,000 + 1,000 + 700 + 60$

Write each number in word form and short word form.

713, 584, 256

$100,000,000 + 8,000,000 + 300,000 + 800 + 40$

Write the number in standard form and expanded form.

622 million , 852 thousand , 400

Think

Write two 8-digit numbers that have a 4 in the millions place, a 6 in ten thousands place, and a 9 in the ones place.

Compare Numbers

Compare **52,461** and **52,820**

Use a number line.



52,820 comes to the right of 52,461 on the number line. So, **52,461 < 52,820**.

Compare, Write $>$, $<$, or $=$ for each

632 623

3,225 2,989

6,349 1,921

301,634 103,364

651,201 651,201

350,219,621 530,219,621

60,000 60 thousands

4 hundreds 4,000

5 ten thousands 500,000



Order Numbers

Order these numbers from least to greatest.

76,251 74,420 75,429

Line up the digits by place value.

74,420

75,429

76,251

Compare the digits that are different.

6 is the greatest digit, so 76,251 the greatest number.

Now, Compare the other two number.

74,420

75,429

$4 < 5$ so 74,420 is smaller.

So the order of the numbers from least to greatest is:

74,420 75,429 76,251

Write the numbers in order from least to greatest.

6,200 2,060 6,002

10,177 11,651 9,364

Write the numbers in order from greatest to least.

13,426 13,326 13,226

37,115 37,151 36,864

Round Numbers

Round each number to the place of the coloured digit.

Round the number **135,721** to the nearest thousand

Find the place you want to round to.

135,721
↑
thousands place

If the digit to its right is 5 or greater, than 5
the digit in the rounded place increases.
135.721 rounds to 136,000

42 519

37 640

19,950

734,012

4,791,202

4,663,830

6031,061,002

Think

Ali drove 2,769 miles on his cross country trip.
He rounded that number to 2,800 miles when
he spoke of the trip. To which place was the number rounded?

Show your work

Addition Properties

The commutative Property: When you change the order of the addends, the sum stays the same.

$$\begin{aligned} 32 + 67 &= 67 + 32 \\ 99 &= 99 \end{aligned}$$

Associative Property: When three or more numbers are added the sum is the same regardless of the order of the addends

$$(18+14) + 25 = (18+25) + 14 = 18 + (25+14)$$

$$\begin{aligned} 32 + 25 &= 43 + 14 = 18 + 39 \\ 57 &= 57 = 57 \end{aligned}$$

The way you group the addends doesn't matter.

The zero Property: The zero added to any number is the same as the original number.

$$850 + 0 = 850$$

Copy and complete each number sentences. Tell which property of addition you used.

$$32 + 67 = \square + 32$$

$$540 + 0 = \square$$

$$(15 + 7) + 23 = 15 +$$

$$(27 + 18) + 13 = 27 +$$

Use the Associative Property to help you find each sum mentally.

$$93 + 25 + 25 =$$

$$151 + 62 + 49 =$$

$$422 + 345 + 78 =$$

Think

On Tuesday Qusim picked 26 apples of a tree. On Wednesday, he picked 15 apples of the tree. On Thursday, he picked the remaining 9 apples of the tree. How many apples were on the tree?

Show your work

Estimate Sums and Differences

Round each number to the nearest hundred. Then estimate.

$$620 - 250$$

$$750 + 238$$

750 **rounds to** 800

$$238 \text{ rounds to } \frac{200}{1000}$$

750 + 238 is about 1000

$$833 + 121$$

$$\begin{array}{r} 5,264 \\ + 2,613 \\ \hline \end{array}$$

$$941 - 502$$

$$\begin{array}{r} 3,449 \\ + 5,287 \\ \hline \end{array}$$

Round each number to the nearest ten. Then estimate.

$$\begin{array}{r} 5,328 \\ - 784 \\ \hline \end{array}$$

$$\begin{array}{r} 61,358 \\ + 9,513 \\ \hline \end{array}$$

$$\begin{array}{r} 942 \\ + 368 \\ \hline \end{array}$$

Think

Nasser listened to three CDs. The first one was 62 minutes long. The second one was 48 minutes long. The third one was 73 minutes long. About how many total minutes of music did Nasser listen to?
(Round your answer to the nearest ten).

Show your work

Add Whole Numbers

Add. Check by estimating.

$$2,874 + 957$$

$$\begin{array}{r} 1\ 1\ 1 \\ 2,874 \\ +\ 957 \\ \hline 3,831 \end{array}$$

Remember to carry to the next digit if the sum of the digits in a place value is 10 or greater.

Check by estimating.

$$\begin{array}{r} 2,847 \rightarrow 3,000 \\ +\ 957 \rightarrow +\ 1,000 \\ \hline 4,000 \end{array}$$

3,831 is close to 4,000.
The answer is reasonable.

$$\begin{array}{r} 5,108 \\ +4,843 \\ \hline \end{array}$$

$$\begin{array}{r} 1,753 \\ +4,637 \\ \hline \end{array}$$

$$\begin{array}{r} 3,842 \\ +3,584 \\ \hline \end{array}$$

$$\begin{array}{r} 2,884 \\ +4,067 \\ \hline \end{array}$$

$$\begin{array}{r} 5,523 \\ +\ 182 \\ \hline \end{array}$$

$$\begin{array}{r} 7,366 \\ +3,309 \\ \hline \end{array}$$

$$425 + 123 + 662 =$$

$$325 + 901 + 411 =$$

$$5,320 + 5,641 + 9,635 =$$

Think

"Alice Adventures" sold about 651 on Friday,
313 on Saturday, and 225 on Monday.

What was the total quantity sold over the three days ?

Show your work

Subtract Whole Numbers

Subtract. Use addition or estimation to check.

$$3,675 - 879$$

$$\begin{array}{r} 2 \quad 15 \quad 16 \\ 3,675 \\ - 879 \\ \hline 2,796 \end{array}$$

If necessary, regroup before you subtract.

Check by adding.

$$\begin{array}{r} 2,796 \\ + 879 \\ \hline 3675 \end{array}$$

$$\begin{array}{r} 5,378 \\ - 849 \\ \hline \end{array}$$

$$\begin{array}{r} 7,235 \\ - 953 \\ \hline \end{array}$$

$$\begin{array}{r} 8,135 \\ - 846 \\ \hline \end{array}$$

$$\begin{array}{r} 913,23 \\ - 824,18 \\ \hline \end{array}$$

$$\begin{array}{r} 9,354 \\ - 7,889 \\ \hline \end{array}$$

$$88,55 - 44,57 = \underline{\hspace{2cm}}$$

$$91,11 - 54,87 = \underline{\hspace{2cm}}$$

Find each missing number.

$$\boxed{} + 5,495 = 17,883$$

$$1,398 - \boxed{} = 817$$

Think

A concert hall seats 2,101 people. If 1,850 people attended last night's concert. How many seats were unoccupied?

Show your work

Multiplication Properties

There are four properties involving multiplication that will help make problems easier to solve:

1. **Commutative Property:** when two numbers are multiplied together the product is the same regardless of the order of the multiplication.

$$7 \times 5 = 5 \times 7$$
$$(35) = (35)$$

2. **Associative Property:** When three or more numbers are multiplication.

$$(2 \times 3) \times 4 = 2 \times (3 \times 4)$$

$$6 \times 4 = 2 \times 12$$

$$(24) = (24)$$

you can group the factors in the way you like.

3. **Distributive Property:** The product of a number multiplied by another number equals the sum of the products of that number multiplied by each of the addends

$$6 \times 15 = 6 (10+5)$$

$$(6 \times 10) + (6 \times 5)$$

$$60 + 30 = 90$$