

Second grade math test

1. Which numbers comes next?

16 , 22 , 28 , _____ , _____

$$16 + 6 = 22 \text{ and } 22 + 6 = 28$$

So, 6 must be added to get the next two numbers.

We get 16, 22, 28, 34, 40

2. Which coin is the biggest in size and is less than 50 cents. _____

A. Dime B. Quarter C. Penny D. Nickel

Dime = 10 cents

Quarter = 25 cents

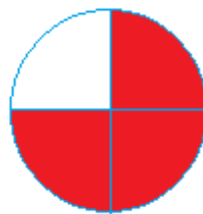
Penny = 1 cent

Nickel = 5 cents

So Quarter is the biggest in size and since it is equal to 25 cents, it is less than 50 cents also

3. Break the rectangle in 3 equal parts and color one-third ($\frac{1}{3}$) of the rectangle.

Break the circle in 4 equal parts and color three-fourth ($\frac{3}{4}$) of the circle.



4. Which of these is the same as 2 days ?

A. 2 weeks B. 24 hours C. 24 minutes D. 2800 minutes

2 weeks is equal to 14 days

24 hours is equal to 1 day

24 minutes is a lot less than 2 days

The answer has to be 2800 minutes.

$$1 \text{ day} = 24 \text{ hours}$$

$$2 \text{ days} = 24 + 24 = 48 \text{ hours}$$

$$1 \text{ hour} = 60 \text{ minutes, so } 48 \text{ hours is equal to } 48 \text{ times } 60$$

$$\begin{array}{r} 60 \\ 48 \\ \hline 12 \\ 240 \\ \hline 288 \end{array}$$

5. Fill in the missing two numbers?

847, 855, ____, 871, ____

$$847 + 8 = 855$$

Let us pretend that to get to the next number, we need to add 8.

$$855 + 8 = 863$$

Since $863 + 8 = 871$, 8 is really the number the add.

We get 847, 855, 863, 871, 879

6. You have 5 quarters, 3 dimes, 2 nickels, and 5 pennies in your pocket.

How much money do you have ? _____ If you buy a candy for 65 cents. How much money are you left with? _____

- A.** \$1.65 and leftover of \$1.00 **B.** \$1.70 and leftover of \$1.00
C. \$1.70 and leftover of \$1.05 **D.** \$1.65 and leftover of \$1.05

1 quarter = 25 cents

5 quarters = (25 cents + 25 cents + 25 cents + 25 cents) + 25 = 1 dollar + 25 cents

1 dime = 10 cents

3 dimes = 30 cents

1 nickel = 5 cents

2 nickels = 10 cents

1 penny = 1 cent

5 pennies = 5 cents

Add everything that is underlined

1 dollar + 25 cents + 30 cents + 10 cents + 5 cents = 1 dollar + 70 cents

You have 1 dollar and 70 cents in your pocket or 1.70 dollar

If you buy something for 65 cents, just subtract 65 from 70.

70 cents – 65 cents = 5 cents

You are left with 1 dollar and 5 cents or 1.05 dollar.

7. At a wedding reception, there are 458 guests but 324 meals. How many more meals are needed? _____

The number of meals needed is whatever you add to 324 to get 458 or 458 minus 324

$$\begin{array}{r} 458 \\ - 324 \\ \hline 134 \end{array}$$

Thus, there is a need to have 134 more meals

8. Which figure is the same of both sides of the red line?

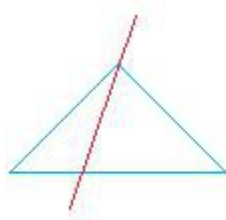


Figure #1

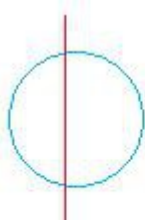


Figure #2

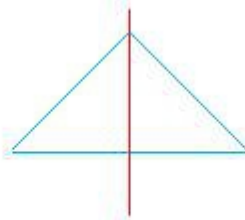


Figure #3

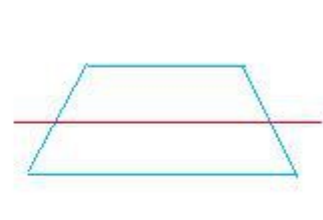


Figure #4

This is the same as asking which figure shows symmetry with respect to the red line

Figure #3 is the same on both sides of the red line

It is obvious that figure #1 is not the same on both side of the red line. The left piece is smaller than the right piece

For figure #2, the red line does not cut the circle through the middle.

For figure #4, the bottom piece is bigger than the top piece

9. Tell if the number on the left is less or greater than the number on the right. Replace the question mark (?) with $<$ or $>$

$$87 \quad ? \quad 81$$

$$157 \quad ? \quad 211$$

$$87 \quad > \quad 81$$

$$157 \quad < \quad 211$$

Notice that it is the number on the left that tells you which symbol you are using.

If the number on the left is bigger than the number on the right, use $>$

If the number on the left is smaller than the number on the right, use $<$

10. Which number has 5 in the hundreds place and 2 in the ones place

A. 152 B. 252 C. 521 D. 512

See place value chart below:

thousands | hundreds | tens | ones |

Let us compare 512 with this chart.

The first number on the right that is 2 always goes to the ones place

thousands	hundreds	tens	ones
	5	1	2

You can see now that 5 is in the hundreds place and 2 is in the ones place

11. For the number 985, what digit is in the

tens place? _____ ones place? _____ hundreds place _____

Use this place value chart: thousands | hundreds | tens | ones |

thousands	hundreds	tens	ones
	9	8	5

Thus, 8 is in the tens place. 5 is in the ones place. 9 is in the hundreds place

12. Perform the following additions and subtractions

$$\begin{array}{r} 344 \\ + 132 \\ \hline \end{array}$$

$$\begin{array}{r} 654 \\ + 323 \\ \hline \end{array}$$

$$\begin{array}{r} 987 \\ - 445 \\ \hline \end{array}$$

$$\begin{array}{r} 863 \\ - 752 \\ \hline \end{array}$$

Method for adding: There are no carries here, so add the numbers in the same place value

Add the ones and put the answer in the ones place

Add the tens and put the answer in the tens place

Add the hundreds and put the answer in the hundreds place

$$\begin{array}{r} 344 \\ + 132 \\ \hline 476 \end{array}$$

$$\begin{array}{r} 654 \\ + 323 \\ \hline 977 \end{array}$$

Method for subtracting: There are no borrowing here, so subtract the numbers in the same place value.

Subtract the ones and put the answer in the ones place

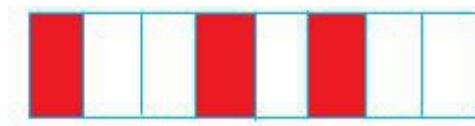
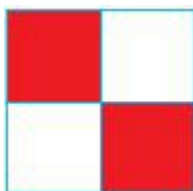
Subtract the tens and put the answer in the tens place

Subtract the hundreds and put the answer in the hundreds place

$$\begin{array}{r} 987 \\ - 445 \\ \hline 542 \end{array}$$

$$\begin{array}{r} 863 \\ - 752 \\ \hline 111 \end{array}$$

13. Look at the figure below and then write the fractions in the space below:



The figure on the left has 4 parts and 2 parts are shaded, so the fraction is $\frac{2}{4}$

The figure on the right has 8 parts and 3 parts are shaded, so the fraction is $\frac{3}{8}$

14. Tell if the number on the left is less or greater than the number on the right. Replace the question mark (?) with $<$, $=$, or $>$

$$42 + 14 \quad ? \quad 56$$

$$65 + 33 \quad ? \quad 90$$

$$42 + 14 = 56$$

$$65 + 33 = 98$$

$$56 \quad ? \quad 56$$

$$98 \quad ? \quad 90$$

$$56 \quad = \quad 56$$

$$98 \quad > \quad 90$$

Notice that it is the number on the left that tells you which symbol you are using.

If the number on the left is bigger than the number on the right, use $>$

If the number on the left is smaller than the number on the right, use $<$

15. Write the following numbers in words

25 _____ 48 _____

124 _____ 256 _____

25 : twenty-five

48: Forty-eight

124: One hundred twenty-four

256: two hundreds fifty-six

16. What is the geometric name for a figure that looks like

the earth? _____ Indian tents like tipis? _____

a pipe that carry water? ____

The earth has the same shape as a ball. The geometric name is sphere

The indian tents like tipis has the same shape as an ice cream cone. The geometric name is cone

A pipe that carry water has the same shape as a soda can. The geometric name is cylinder

17. Fill in the blank for the missing numbers

467, 459, _____ 443, 435, _____

Here the number are getting smaller, so we need to subtract a number

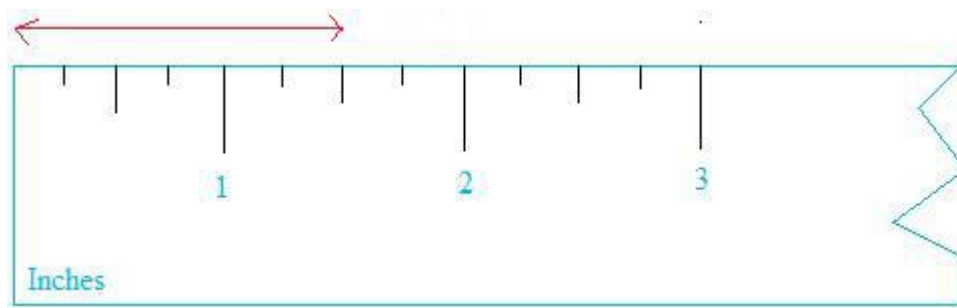
$$467 - 8 = 459$$

$$459 - 8 = 451$$

Since $451 - 8 = 443$, the number to subtract is really 8.

We get : 467, 459, 451, 443, 435, 427

18. What is the measure of the length shown in red below?



The unit is inches

The arrow is between 1 and 2.

What number is between 1 and 2? It is 1.5

The length is 1.5 inches

19. Which math problem means the same thing as $20 + 8 = 28$? _____

- A.** $20 - 8 = 12$ **B.** $28 - 8 = 20$ **C.** $28 - 8 = 18$ **D.** $8 - 28 = 20$

A simple way to explain this is to say that you have 20 candies. Someone give you 8 more.

You now have 28. ($20 + 8 = 28$)

You now decide that 28 is too many for you to have, so you give these 8 candies away to your brother ($28 - 8 = 20$)

$20 - 8 = 12$ cannot be the same as $20 + 8 = 28$ because one has a minus and the other has a plus although the numbers in the expression are the same.

$28 - 8 = 18$ is just a false math expression because $28 - 8 = 20$.

$8 - 28 = 20$ is also a false expression. Since you are subtracting a bigger number, the answer should be less than 0

20. math Puzzles: Who am I?

- a.** $55 + 66$ is more than I am. $55 + 63$ is less than I am. I am an even number
b. I have 3 digits and I am the second highest number before the smallest number with 4 digits

- a.** A good thing to do here is to do the math for $55 + 66$ and $55 + 63$

$$55 + 66 = 121$$

$$55 + 63 = 118$$

Let's restate the problem. 121 is more than I am and 118 is less than I am.

Choices: 119 and 120

Since the number is even, we are left with 120.

b.

The smallest number with 4 digits is 1000

Highest number before 1000 is 999

Second highest number before 1000 is 998.