

Sixth Grade

Name: Date:

1. In the equation below, what is the value of x

$$20 = x + (2 \times 8) - 6$$

2. Sarah has 30 pencils. Her friend Sylvia has k less pencils. Which expression shows the number of pencils Sylvia has?

A. $30 + k$ **B.** $k - 30$ **C.** $30 - k$ **D.** $30 - 2k$

3. Use the following list to find the average or mean, the median, the mode, and the range 10, 15, 5, 8, 6, 6, 2

Average = _____ Median = _____

Mode = _____ range = _____

4. $-5 - 8 =$ _____ $5 - 8 =$ _____ $-8 - 5 =$ _____

5. Find the perimeter and area of the rectangle below:

Perimeter = _____ units

Area = _____ square units

6. Add $\frac{3}{5}$ and $\frac{2}{7}$ _____

7. For the number 76.2345, the value of the digit 4 is

A. 4 tens **B.** 4 tenths **C.** 4 thousandths **D.** 4 ten-thousandths

8. If $9450 / x$ equals 21, what is x ? _____

9. Put the following numbers, in order from least to greatest

$-\frac{1}{4}$, $\frac{7}{4}$, 0.90, $-\frac{2}{4}$, 0.20, $\frac{3}{4}$, 1.50, -0.50,

_____, _____, _____, _____, _____, _____, _____, _____

10. a. You want to save money to buy a bike. You start with 50 dollars and you save 4 dollars each day. Which expression shows the amount of money you have after x days?

A. $50 - 4x$ **B.** $4x - 50$ **C.** $4x + 50$ **D.** $50 + 4 \times 10$

b. How much money do you have after 20 days?

A. 120 dollars **B.** 130 dollars **C.** 110 dollars **D.** 200 dollars

11. How many lines of symmetry does a square have? _____

12. The diameter of a circle is 8 inches

The perimeter and area are :

A. $P = 4\pi$ and $A = 12\pi$ **B.** $P = 16\pi$ and $A = 8\pi$

C. $P = 8\pi$ and $A = 16\pi$ **D.** $P = 16\pi$ and $A = 4\pi$

13. John and Peter have 40 dollars together. If John has 4 times more money than Peter. How much money does each have? (Hint: try trial and error)

John has _____ dollars

Peter has _____
dollars

14. A machine produces 5000 items in 6 minutes. Which proportion **cannot** be used to find how many minutes it takes to produce 15000 items?

A. $5000 / 6 = 15000 / x$ **B.** $5000 / 6 = x / 15000$

C. $6 / x = 5000 / 15000$ **D.** $6 / 5000 = x / 15000$

15. You go to the restaurant and buy food for 120 dollars. The restaurant requires a 15% tip. What is your total?

16. In a map, 1 inch represents 30 miles. How many inches will show a distance of 120 miles? _____

17. A box contains 6 blue marbles, 4 yellow marbles, and 10 red marbles.

What is the probability of choosing a red marble?

A. 4 / 20 **B.** 3 / 20 **C.** 6 / 20 **D.** 10 / 20

Which color is less likely to be picked?

18. Evaluate the numerical expression below:

$$(8 + 2)[(7 - 3) \times 5]$$

A. 100 **B.** 150 **C.** 300 **D.** 200

19. What is the sum of the angle in a pentagon? (Hint: divide the pentagon into triangles. A triangle is 180 degrees)

20. What is the volume and surface area of the following rectangular prism?

Volume = _____

Surface area = _____

21. The shape of a swimming pool is more like a

A. Rectangular prism **B.** Circle **C.** Pyramid **D.** Sphere

22. You go shopping and you see a sign that says." Buy 1 T-shirt and get 20% off on

the second T-shirt. The T-shirt cost 30 dollars and you buy 2 T-shirts. What is your total? _____