

**PRACTICE TEST WITH  
SAMPLE TEST ITEMS**

**BASED ON GRADE LEVEL STANDARDS**

**MATH**

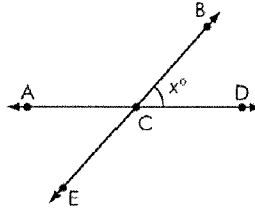
**EIGHTH GRADE**



Grade 8 Mathematics Sample

1.

Lines AD and BE intersect at point C, as shown.



Create an expression that represents the measure of angle DCE in terms of  $x$ .

**Answer:** \_\_\_\_\_

2.

Create an expression equivalent to  $2(3x - 1) - 3x + 4$  using the least number of terms.

**Answer:** \_\_\_\_\_

3. Rose went to a stationery shop. She purchased 2 packs of red pens, 4 packs of black pens, and 3 packs of blue pens. The cost of each pack of pens was \$2.50. The expression  $\$2.50 \times 2 + \$2.50 \times 4 + \$2.50 \times 3$  represents the total amount of money she spent on pens. How can this expression be rewritten?

A.  $\$2.50 \times 2 \times 4 \times 3$

C.  $\$2.50 + (2 \times 4 \times 3)$

B.  $\$2.50 \times (2 + 4 + 3)$

D.  $\$2.50 + 2 + 4 + 3$

4. The temperature in Perrysburg, Ohio, was  $-6^\circ\text{F}$ .

The temperature today in Perrysburg is  $6^\circ\text{F}$  warmer.

What is the temperature today?

A.  $-12^\circ\text{F}$

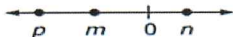
C.  $6^\circ\text{F}$

B.  $12^\circ\text{F}$

D.  $0^\circ\text{F}$

5.

Three numbers are plotted on a number line, as shown.



**Part A**

Which expression is equivalent to  $m - n$ ?

A.  $-m + n$

C.  $m + n$

B.  $-m + (-n)$

D.  $m + (-n)$

**Part B**

For each expression identify whether the value of the expression is to the left or to the right of  $m$  on the number line.

	to the left of $m$	to the right of $m$
$m + n$		
$m - n$		
$m + p$		
$m - p$		

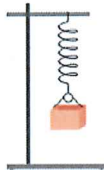
**Part C**

Create an expression that represents the distance on the number line between  $m$  and  $p$ .

**Equation:** \_\_\_\_\_

6. Gerard adds weight to the end of the hanging spring shown.

The spring stretches to a length of  $p$  centimeters. Gerard removes some weight and the spring moves up by  $q$  centimeters.



Which expression represents the length of the spring after Gerard removes some weight?

A.  $p - (-q)$

C.  $p + (-q)$

B.  $(-p) - q$

D.  $-q + (-p)$

7. There are 300 students in 7<sup>th</sup> grade. Paul takes a random sample to find out which fall sport the students in 7<sup>th</sup> grade prefer.

Which group of students represents the most valid sample?

A. 10 of Paul's closet friend

B. 10 students from each grade

C. 10 students from each 7<sup>th</sup> grade homeroom

D. 10 students on the 7<sup>th</sup> grade basketball team

8.

An online music store sells songs on its website. Each song is the same price. The cost to purchase 8 songs is \$10.

**Part A**

Create an equation to represent the relationship between the total cost,  $c$ , and the number of songs,  $s$ , purchased.

**Equation:** \_\_\_\_\_

**Part B**

At this rate, how many songs can be purchased for \$25?

**Answer** \_\_\_\_\_ **Songs**

9. Which number is equivalent to  $\frac{8}{11}$  ?

A. 0.72

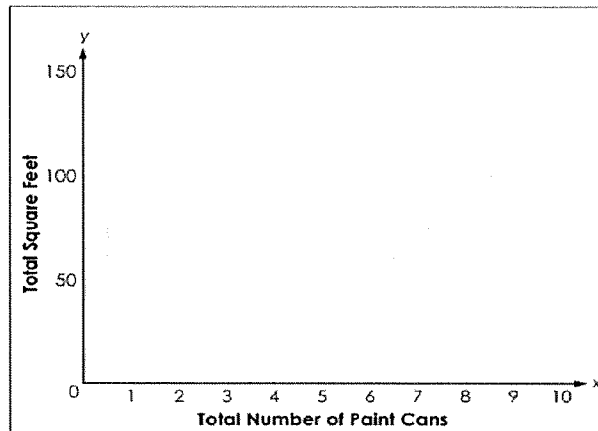
C.  $0.\bar{7}$

B.  $0.\overline{72}$

D. 1.375

10. Michael knows that 2 cans of paint is the exact amount he needs to paint a 10-foot by 12-foot wall.

Graph the relationship between the total square feet of the walls and the number of paint cans necessary to paint them.



11.

The low temperatures on New Year's Day in a city for 5 years are shown below.

$2^{\circ}\text{F}$ ,  $-10^{\circ}\text{F}$ ,  $7^{\circ}\text{F}$ ,  $4^{\circ}\text{F}$ ,  $-13^{\circ}\text{F}$

**Part A**

What was the average low temperature on New Year's Day for the 5 years?

A.  $-2.5^{\circ}\text{F}$

C.  $0.6^{\circ}\text{F}$

B.  $-2^{\circ}\text{F}$

D.  $4^{\circ}\text{F}$

**Part B**

If, in the 6th year, the low temperature was  $7^{\circ}\text{F}$ , what was the average low temperature for the 6 years?

A.  $-0.5^{\circ}\text{F}$

C.  $0.8^{\circ}\text{F}$

B.  $-0.2^{\circ}\text{F}$

D.  $1.4^{\circ}\text{F}$

12.

The relationship between the number of cups of water,  $w$ , and the number of cups of lemon juice,  $j$ , used in a recipe is described by the equation shown.

$$j = 2w$$

How many cups of water are needed for each cup of lemon juice?

Answer: \_\_\_\_\_ Cups

The letter tiles shown are placed in a bowl. Matt selects one tile from the bowl.



What is the probability that Matt will select one of the letters in the word "JUMP"?

Answer: \_\_\_\_\_