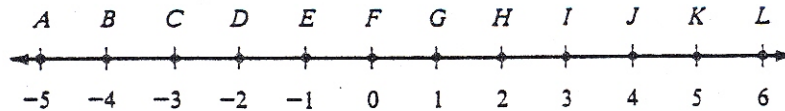


**ANSWERS!**

**DIRECTIONS:** For #1-2, use the following number line to answer the questions.



1. What are the name and the coordinate of the point halfway between  $H$  and  $L$ ?  **$J, 4$**
2. What are the name and the coordinate of the point 3 units to the left of  $G$ ?  **$D, -2$**

**DIRECTIONS:** For #3-6, accurately classify the statements as TRUE or FALSE. Write the entire word in the provided blank.

- |                              |                                             |
|------------------------------|---------------------------------------------|
| 3. $ 5  <  -5 $ <b>False</b> | 4. $0 < -8$ <b>False</b>                    |
| 5. $7 > -5$ <b>True</b>      | 6. $\frac{5}{3} < \frac{1}{3}$ <b>False</b> |

**DIRECTIONS:** For #7, list the numbers in order from least to greatest in the provided blanks.

7.  $-2.1, 0, -4, -2.15, 2, \frac{3}{2}$   **$-4, -2.15, -2.1, 0, \frac{3}{2}, 2$**

**DIRECTIONS:** For #8-20, simplify each expression. Write answers in provided blanks. Show work.

8.  $3[6(7 - 4) - 5^2]$

9.  $\frac{18-3 \cdot 4}{\frac{9}{3} - 1}$

**-21**

**3**

**10.**  $\frac{16}{2} - 5 \cdot 6 + 2$

**-20**

**11.**  $4 + 7 + (-6)$

**5**

**12.**  $6 - [10 + (-4 + 9)]$

**-9**

**13.**  $4(x - 5) + (x + 5)$

 **$5x - 15$** 

**14.**  $(-5m + p) + 6(m - 2p)$

 **$m - 11p$** 

**15.**  $\left(-\frac{3}{4}\right)\left(\frac{12}{5}\right)$

 **$-\frac{9}{5}$** 

**16.**  $100 \div (-20) \div (-10)$

 **$\frac{1}{2}$** 

**17.**  $\frac{(5)(3) + (-4)^3}{(-42) \div 6}$

**7**

18.  $\frac{16n^2+24n-4}{4}$

$4n^2 + 6n - 1$

19.  $[90 \div (-3) + 6] \div [4 \bullet (-5 + 8)]$

$-2$

20.  $2[3(-8) + 20] \div [10 \div (-5) + 4]$

$-4$

DIRECTIONS: For #21-24, evaluate the expressions for  $x = 4$ ,  $y = 3$ , and  $z = 1$ . Write answers in provided blanks. Show work.

21.  $x^2 - y^2$

$7$

22.  $-(y^2 + x^2 - z^2)$

$-24$

23.  $\frac{x^2-z^2}{x+z}$

$3$

24.  $2y + x^2 - yz$

$19$

DIRECTIONS: For #25, solve for  $w$ . Write answer in provided blank. Show work.

25.  $4w - x = t$   $w = \frac{t+x}{4}$

DIRECTIONS: For #26-28, solve for the variable in the equation. Write answers in provided blanks. Show work.

26.  $5(k - 4) = 3k + 8$   $k = 14$

27.  $4(w + 2) - 2(3w - 5) = 2(3 + w)$   $w = 3$

28.  $7x - 5 = 3x - (5 - 4x)$  **all real numbers**

DIRECTIONS: For #29=30, write accurate expressions for the given information.

29. Six more than the reciprocal of a number  $\frac{1}{n} + 6$

30. The sum of a number and its cube  $n + n^3$

DIRECTIONS: For #31-32, solve the word problems. Clearly label your answers. Show work.

- 31.** A coin collection worth \$2.55 contains nickels, dimes, and quarters. There are twice as many nickels as quarters, and the number of dimes is three more than the number of quarters. How many nickels are in the collection?  
Dimes? Quarters?

**10 nickels**

**8 dimes**

**5 quarters**

- 32.** Two planes leave Pittsburgh at 3:00 PM traveling in opposite directions. If the first plane is traveling at 390 mph and the second plane is traveling at 330 mph, what will be the time of day when they are 2340 miles apart?

**6:15 PM**