

Name each property by writing the letter the property matches before each problem.

#1-7 SKIP

- 1) F  $(6 \cdot 18) \cdot 3 = 6 \cdot (18 \cdot 3)$   
 2) B  $(r + s) \cdot 25 = (s + r) \cdot 25$   
 3) A  $(18 + y) + 0 = 18 + y$   
 4) D  $35 \cdot (10 + c) = (10 + c) \cdot 35$   
 5) Distributive  $8(7 + 19) = 8 \cdot 7 + 8 \cdot 19$   
 6) D  $59ab = 59ba$   
 7) G  $24(0) = 0$

- A. Identity Property for Addition  
 B. Commutative Property for Addition  
 C. Associative Property for Addition  
 D. Commutative Property for Multiplication  
 E. Identity Property for Multiplication  
 F. Associative Property for Multiplication  
 G. Zero Property for Multiplication  
 H. Distributive Property for Addition

Evaluate each expression.

8)  $|-52| + |15| - 5$   
 $52 + 15 - 5$   
 $67 - 5$   
 $62$

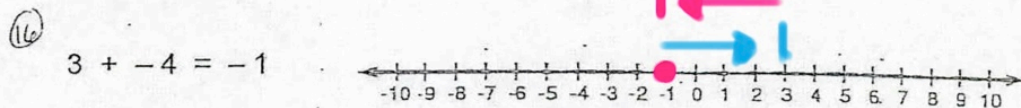
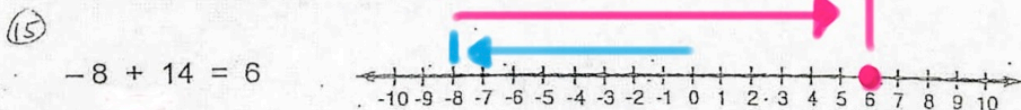
9)  $|-14| - |-19| + 17$   
 $14 - 19 + 17$   
 $-5 + 17$   
 $12$

10)  $|-14| - |-19|$   
 $14 - 19$   
 $-5$

Write a variable expression for each word phrase. Use coefficients when needed.

- 11) the product of  $-3$  and a number increased by  $14$   $-3y + 14$   
 12) the quotient of a number and  $-10$  decreased by  $5$   $\frac{b}{-10} - 5$   
 13)  $6$  less than  $2$  times a number  $2a - 6$   
 14)  $9$  more than a number, divided by  $-8$   $\frac{x+9}{-8}$

Graph the equation on the number line.



Order of operations... Show all steps for credit

Evaluate each expression using the order of operations. Show all steps for credit.

~~G~~  
~~E~~  
~~M~~  
~~D~~  
~~A~~  
~~S~~

(16)  $-6(-2 + 13)$   
 $-6(11)$   
 $-66$

(18)  $(43)(-18)$   
 $-774$

(17)  $-27 + (+13)$   
 $-27 + 13$   
 $-14$

~~G~~  
~~E~~  
~~M~~  
~~D~~  
~~A~~  
~~S~~

(20)  $7^2 + 56 \div 7 - 6^2$   
 $49 + 56 \div 7 - 36$   
 $49 + 8 - 36$   
 $57 - 36$   
 $21$

(21)  $12^2 - (-5 + 14)$   
 $12^2 - (-5 + 4)$   
 $12^2 - (-1)$   
 $144 + (+1)$   
 $145$

(22)  $\frac{384}{-4}$   
 $-96$

(23)

$\frac{-40 - 20}{-20 + 5}$   
 $\frac{-60}{-15}$   
 $4$

~~G~~  
~~E~~  
~~M~~  
~~D~~  
~~A~~  
~~S~~

(24)  $\frac{8^2 + (-10 + 21)}{3^3 - 36 \div 18}$   
 $\frac{8^2 + 11}{3^3 - 36 \div 18}$   
 $\frac{64 + 11}{27 - 36 \div 18}$   
 $\frac{64 + 11}{27 - 2}$   
 $\frac{75}{25} = 3$

(25)

$\frac{-3(4 - 11)}{2^3 - 3^0}$   
 $\frac{-3(-7)}{2^3 - 3^0}$   
 $\frac{-3(-7)}{8 - 1}$   
 $\frac{21}{8 - 1}$   
 $\frac{21}{7} = 3$

Evaluate each expression for  $x = 3$   $y = -4$   $z = -6$

(26)

$x + y$   
 $3 + (-4)$   
 $-1$

(27)

$12 - z$   
 $12 - (-6)$   
 $18$

(28)

$y - z$   
 $(-4) - (-6)$   
 $(-4) + 6$   
 $2$

(29)

$|x| - |y|$   
 $|3| - |-4|$   
 $3 - 4$   
 $-1$

(30)

$2(x - y) - (-10)$   
 $2[3 - (-4)] - (-10)$   
 $2(7) - (-10)$   
 $14 + (+10)$   
 $24$

(31)

$\frac{10y + 5x + 8^0}{2y - z}$   
 $\frac{10(-4) + 5(3) + 8^0}{2(-4) - (-6)}$   
 $\frac{-40 + 15 + 1}{-8 - (-6)}$   
 $\frac{-24}{-2} = 12$

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Solve each equation using inverse operations. Show all steps for credit. Label when needed.

(32)

$$\begin{aligned} -26 &= x - 19 \\ +19 &\quad +19 \\ -7 &= x \\ \boxed{x &= -7} \end{aligned}$$

(33)

$$\begin{aligned} -18 + r &= -37 \\ +18 &\quad +18 \\ \boxed{r &= -19} \end{aligned}$$

(34)

$$\begin{aligned} 672 &= -24b \\ -24 &\quad -24 \\ -28 &= b \\ \boxed{b &= -28} \end{aligned}$$

(35)

$$\begin{aligned} 23 &= \frac{x}{-11} \\ \times &\quad \times \\ -253 &= x \\ \boxed{x &= -253} \end{aligned}$$

(36) After his payment, Mr. Weber's credit card balance was \$245.76. His payment was for \$75.00. Write and solve an equation to find the amount of his credit card bill.

$$\boxed{\text{Credit Card Bill}} - \boxed{\text{Mr. Weber's Payment}} = \boxed{\text{Mr. Weber's Credit Card Balance}}$$

$$\boxed{b - 75 = 245.76} \rightarrow \boxed{b = \$320.76}$$

(37) T.J. gave 16 books to the library book sale. This was  $\frac{1}{3}$  of his books. Write and solve an equation to determine how many books  $b$  T.J. had.

$$\boxed{\text{fraction}} \text{ of } \boxed{\text{Books T.J. had Total}} = \boxed{\text{Book TJ Delivered}}$$

$$\frac{1}{3} * b = 16$$

$$\boxed{b = 48} \text{ Book TJ had Total}$$

(38) Jar candles at the Candle Co. cost \$4. Nikki spent \$92 buying jar candles for party favors. Write and solve an equation to determine how many jar candles  $c$  Nikki bought at the Candle Co.

$$\boxed{\text{Cost of Candles}} \text{ times } \boxed{\text{Amount of candles purchased}} = \boxed{\text{Total Amount Spent}}$$

$$\$4 * c = 92$$

$$\boxed{c = 23}$$

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