

Unit 1 - Test Review

Write each as an algebraic expression.

1) the difference of a number and 20 is greater than or equal to 27

2) twice a number is 25

Write each as a verbal expression.

3) $22 - 13$

4) $n \cdot 12 = 8$

Evaluate each expression.

5) $8 \div -4 - 5$

6) $-4 + 5 \div 5$

7) $5 - (-3 + 2 - 2)$

8) $-2 \div (-6 - (-1 - 3))$

9) $((-5)(-1))(-4 - (-1)^2)$

10) $(5)((8 - -4) \div (-3 + 6))$

Evaluate each using the values given.

11) $p - q \div 6$; use $p = 4$, and $q = -6$

12) $(5)(y - x)$; use $x = -1$, and $y = -5$

13) $y - z + y + y$; use $y = 5$, and $z = -4$

14) $z \div 3 + xy$; use $x = -6$, $y = -2$, and $z = 3$

15) $(p - q - m - 5) \div 2$; use $m = 1$, $p = 4$, and $q = -4$

16) $(z \div 2 + y)(x - z)$; use $x = 5$, $y = 6$, and $z = 2$

Solve each equation.

17) $22 = x - (-6)$

18) $16 + n = 19$

19) $10 + \frac{x}{5} = 14$

20) $-8 + \frac{n}{2} = 2$

21) $-6 + 5a - 3 = -19$

22) $10 - 4p + 4p = p + 5$

$$23) -2(5x - 1) = 82$$

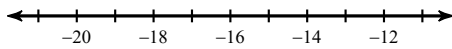
$$24) -18 - 7p = -7(p + 3)$$

$$25) -80 = -5(p + 8) + 2(1 - 8p)$$

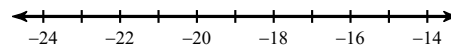
$$26) -3(1 + 7x) = -3(8x + 8) - 4x$$

Solve each inequality and graph its solution.

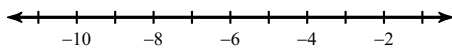
$$27) -10(7 + x) \leq 120$$



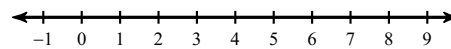
$$28) -3(3 + n) > 39$$



$$29) -6(-2 + 6n) \leq 120$$



$$30) 2n + 23 \geq -7(3 - 6n) + 4$$



Solve each equation for the indicated variable.

$$31) u = x + k, \text{ for } x$$

$$32) 3ma = 2, \text{ for } a$$

$$33) z = b + \frac{m}{a}, \text{ for } a$$

$$34) \frac{1}{2x} = v + 4w, \text{ for } x$$