Algebra 1 Chapter 1 Pre-Test

Write a variable expression for each word phrase.

1.) The 8 more than the product of a number and 4.

+ * $\boxed{8+(n*4)}$ $\boxed{8+4n}$

2.) The 9 less than the sum of k and 7.

switch +

$\boxed{k+7-9}$

$\boxed{(k+7)-9}$

3.) The difference between 12 and b.

4.) The quotient of f and 11.

( )

5.) Two times the quantity 8 plus w.

× $\boxed{2*(8+w)}$ $\boxed{2(8+w)}$

Simplify each expression.

1.) $3 \times 2^2 + 16 \div 4 - 3$

2.) $8 + [(24 \div 4 \times 10) - 2]$

$8+[(6*10)-2]$

$8+[60-2]$

$8+58 = \boxed{66}$

3.) $12 - 3(8^2 + 2^3)$

$12-3(64+8)$

$12-3(72) = 12-72-72-72$

$12-216 = \boxed{-204}$

$68 - 12 \div 2 \div 3 * 2^5$

$68 - 12 \div 2 \div 3 * 32$

$68 - 6 \div 3 * 32$

$68 - 2 * 32$

$68 - 64 = \boxed{4}$

4.) $68 - 12 \div 2 \div 3 \times 2^5$

Evaluate the expression.

1.) $8a + 2(b - c)^2$, for $\boxed{a = 3}$, b = 7, and c = 4

$8(3) + 2(7-4)^2$

$8(3) + 2(3)^2$

$8(3) + 2(9) = 24 + 18 = \boxed{42}$

2.) $3x - 2y - y(9 - 4)$, for x = 4 and y = 2

3.) $def + 6e^3$, for d = 6, e = 2, f = 3

$def = d*e*f$

$(6)(2)(3) + 6(2)^3$

$(6)(2)(3) + 6(8)$

$36 + 48 = \boxed{84}$

4.) $\frac{ab}{2} - 3$, for a = 7, b = 8

Compare. Use >, <, or = to complete each statement.

1.) -6.98 __>__ -6.99

2.) -3 _____ |-8|

3.) |-12| __>__ |-5|

$12 > 5$

4.) 2 _____ -|-9|

Determine whether each number is rational or irrational. In addition, name the set(s) of numbers to which each number belongs.

1.) 6.779 Rational - terminal decimal

2.) 0.567567567… Rational - repeating decimal

3.) 9

4.) 0 Rational - whole, integer

5.) -3

6.) π Irrational

7.) $\sqrt{16}$

8.) $\sqrt{50}$ irrational - not perfect square

9.) ½ Rational - fraction

Find each sum. No CALCULATOR!!

1.) -8 + (-5) = -13 same → sum

2.) 9 + 3

3.) -6 + 8 = 2 different → difference

8 - 6 = +2

4.) 4 + (-11)

FInd the difference of each. No CALCULATOR!!

1.) 8 - 12 $\boxed{-4}$ $8 + (-12) = -4$

2.) -9 - 4

3.) 3 - (-5)

$3 + 5 = \boxed{8}$

4.) -12 - (-6)

Find each. No CALCULATOR!!

1.) 8(-5) = $\boxed{-40}$

2.) $(7)(-3)^2$ = $(7)(9) = \boxed{63}$

3.) (-9)(4)

4.) (-8)(-2) = $\boxed{+16}$ $\boxed{16}$

Keep change Flip

5.) $\frac{-2}{3} \div \frac{3}{4}$

$-\frac{2}{3} \div \frac{3}{4}$

$-\frac{2}{3} * \frac{4}{3} = \boxed{\frac{-8}{9}}$

6.) 84 ÷ (-12)

7.) $\frac{240}{(-2)(-5)}$ + $\frac{24\cancel{0}}{1\cancel{0}} = \boxed{24}$

Evaluate each expression.

1.) $-ab^2$ for a = 2 and b = -3

$-2(-3)^2 = -2(9) = \boxed{-18}$

2.) $-(-w)^2$ for w = 3

3.) $-x^3 + xy$ for x = 4 and y = -5

$-x^3$

$\cancel{(-4)^3}$ $-(4)^3$

$-(4)^3 + (4)(-5)$

$-64 + (-20) = \boxed{-84}$

Simplify each expression.

1.) $\frac{2}{5}(5a + 45)$

$\frac{2}{5}\left(\frac{5a}{1}\right) + \frac{2}{5}\left(\frac{45}{1}\right)$

$\frac{10a}{5} + \frac{90}{5} = \boxed{2a + 18}$

2.) $6(x + 3) - 4x$

3.) $-8 - 4(3b + 7)$

$\boxed{-12b - 36}$

$-8 - 12b - 28$

$-8 - 28 = -8 + (-28) = -36$

4.) $-(4s^2 + 1)$

Name the property that each equation illustrates.

commutative
associative
identity
inverse
distributive

1.) $(4 \cdot 5) \cdot 2 = 4 \cdot (5 \cdot 2)$

associative

2.) $23 + 54 + 27 = 23 + 27 + 54$

commutative

3.) $5 + 0 = 5$

identity

4.) $\frac{2}{3}(3/2) = 1$

inverse

5.) $3(a + b) = 3a + 3b$ distributive

Label each quadrant. Next, plot the points below.

1.) A (6, -4)
2.) B (-7, 2)
3.) C (0, 8)
4.) D (3, 9)
5.) E (-7, -1)
6.) F (-4, 0)