Name: ..... Date: / / 2023

Grade/ Section: ( ) **Diagnostic Test** Mathematics

Evaluate each expression.

1) $3-(-5)$

A) 8 B) 9
C) 3 D) 16

2) $(-49)-(-37)-(-50)$

A) 38 B) 16
C) 77 D) 0

Simplify each expression.

3) $(5-m)-(3m-3)$

A) $-6m+7$ B) $-4m+8$
C) $-4m+7$ D) $-6m+12$

4) $(14m^5+11-m^4)+(-m^4-14+2m^5)$

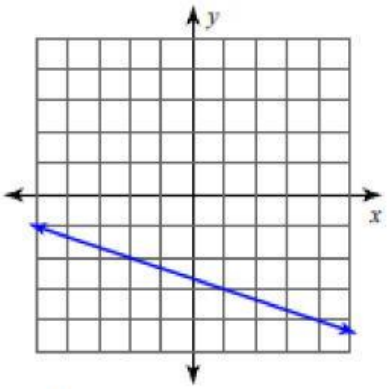
A) $16m^5-15m^4+10$
B) $16m^5-2m^4-3$
C) $16m^5-2m^4+10$
D) $16m^5-15m^4+4$

Find the slope of each line.

5) $y=-2x-4$

A) $\frac{1}{2}$ B) -2
C) $-\frac{1}{2}$ D) 2

6)



A) $\frac{1}{3}$ B) -3
C) 3 D) $-\frac{1}{3}$

Solve each equation for the indicated variable.

7) $z=-6x$, for x

A) $x=\frac{z}{6}$ B) $x=-\frac{6}{z}$
C) $x=\frac{6}{z}$ D) $x=-\frac{z}{6}$

8) $m+a=n-p$, for a

A) $a=-m-n+p$
B) $a=-m+n-p$
C) $a=m-n+p$
D) $a=p+n+m$

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Solve each equation.

9) $-12 = b - 6 + b$

A) $\{1\}$ B) $\{-3\}$
C) $\{-2\}$ D) $\{-6\}$

10) $-(3n + 5) = -8 - 6n$

A) $\{-8\}$ B) $\{-9\}$
C) $\{-11\}$ D) $\{-1\}$

Solve each proportion.

11) $\frac{4}{5} = \frac{7}{6m}$

A) $\{6.3\}$ B) $\{6\}$
C) $\{1.46\}$ D) $\{5.4\}$

12) $\frac{n}{2} = -\frac{10}{9}$

A) $\{-4.33\}$ B) $\{-4.7\}$
C) $\{6.7\}$ D) $\{-2.22\}$

Solve each equation.

13) $|2 + x| = 1$

A) $\{-1\}$ B) $\{5, -5\}$
C) $\{-1, -3\}$ D) $\{6, -4\}$

14) $k + 2 = -4$

A) $\{-2\}$ B) $\{-8\}$
C) $\{1\}$ D) $\{-6\}$

Find the median for each data set.

15) Annual Household Income

7,150	8,300	11,550	18,700
19,350	22,550	24,550	29,900
31,650			

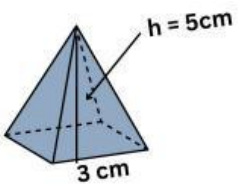
A) 11,300 B) 21,900
C) 19,350 D) 23,250

16) What is the area of the circle, if the radius is 3 cm.?

A) 28.26 cm^2
B) 9 cm^2
C) 18 cm^2
D) 27 cm^2

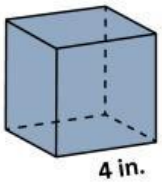
16) What is the volume of the square pyramid below?

A) 28.26 cm^3
B) 15 cm^3
C) 30 cm^3
D) 45 cm^3



17) What is the surface area of the cube below?

A) 16 cm^2
B) 32 cm^2
C) 48 cm^2
D) 96 cm^2



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