Preparing for Geometry Name_____ ID: 1

Summer Review

Date_____ Period____

Order of Operations (PEMDAS): Evaluate each expression.

1) $\left((-8) + 3^2\right) \cdot (-1) + \left|4\right|$

2) $4 + 7 - (-9) + \left(\frac{-30}{-5}\right) - ((-10) - (-3))$

3) $(-2)\left(\frac{((-3) - 3) \cdot 2}{\left|(-4)\right|} - (3 - (-2))\right)$

Order of Operations Substitution (PEMDAS):Evaluate each using the values given.

4) $\left|x\right| - (x + z) + 8y$; use $x = 8$, $y = -2$, and $z = 6$

5) $\frac{p - 3 - 8m\left|m\right|}{2}$; use $m = 4$, and $p = 1$

Rational Operations: Evaluate each expression.

6) $\frac{1}{2} - 3\frac{1}{3}$

7) $\left(-1\frac{2}{5}\right) - \left(-3\frac{1}{2}\right)$

8) $1\frac{5}{6} \cdot \frac{4}{7}$

9) $3\frac{3}{8} \cdot -\frac{1}{9}$

10) $-3\frac{3}{4} \div \frac{9}{5}$

11) $-5 \div \frac{-11}{9}$

Multi-Step Equations: Solve each equation.

12) $-7(x - 10) = 119$

13) $-9(1 + 8v) - 9 = -3v - 18$

14) $-10(x + 4) - 8(x + 9) = -4$

15) $10(2 - r) - 8(r - 4) = -9r - 9r$

Simplifying Radicals: Simplify.

16) $\sqrt{48}$

17) $\sqrt{245}$

18) $\sqrt{392}$

19) $\sqrt{360}$

20) $-10\sqrt{208}$

21) $-14\sqrt{294}$

Midpoint: Find the midpoint of the line segment with the given endpoints.

$$M = \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$$

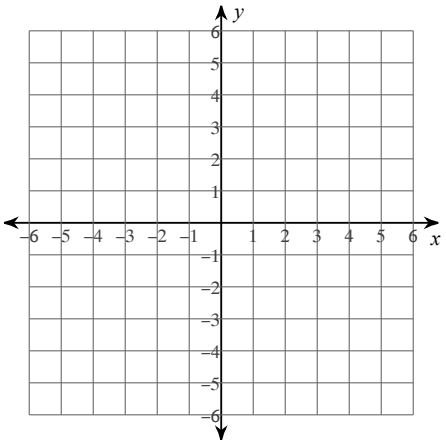
22) $(-9, 15), (-16, -11)$

Distance Formula: Find the distance between each pair of points. $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$

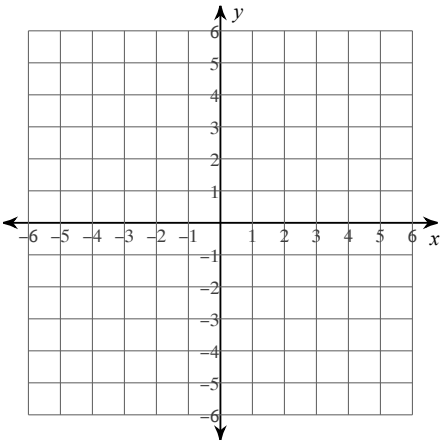
23) $(2, -5), (4, -9)$

Linear Functions: Sketch the graph of each line.

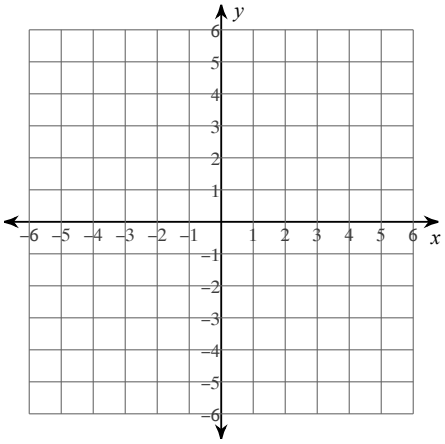
24) $y = -\frac{4}{5}x + 1$



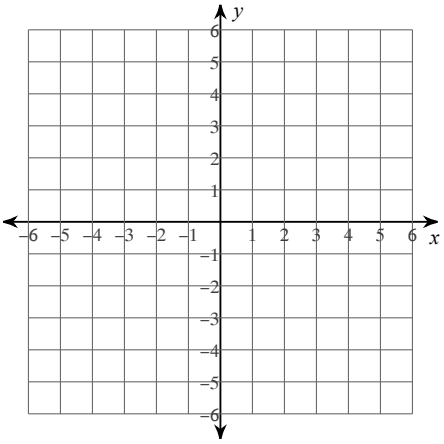
25) $y = \frac{5}{3}x$



26) $x - y = 4$

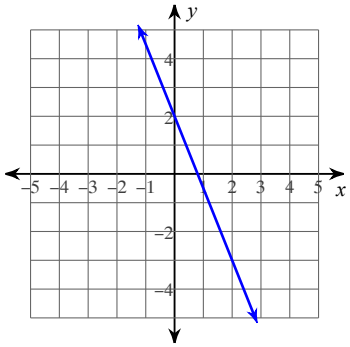


27) $4x - 5y = 5$



Slope- Intercept Form: Write the slope-intercept form of the equation of each line.

28)



Writing Slope- Intercept Equations: Write the slope-intercept form of the equation of the line through the given points.

29) through: $(0, 3)$ and $(-4, 1)$

Proportions: Solve each proportion.

30) $\frac{9}{6} = \frac{b}{5}$

31) $\frac{6}{5} = \frac{2}{b}$

32) $\frac{5}{9} = \frac{x+5}{5}$

33) $\frac{9}{2} = \frac{5}{n+1}$

Multiplying Polynomials: Find each product.

34) $(2v + 6)(3v + 7)$

35) $(4x + 6)(x + 7)$

36) $(7b - 7)(3b + 7)$

37) $(n - 5)(n^2 + 5n + 7)$

38) $(5n^2 - 7n - 4)(5n^2 - 2n + 8)$

Factoring: Factor each completely.

39) $x^2 - 9x - 22$

40) $b^2 - 16b + 64$

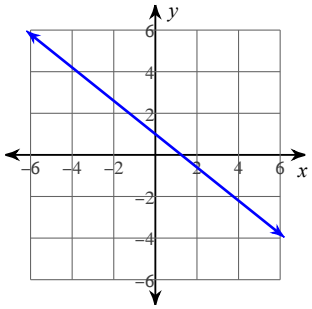
41) $7n^2 - 42n - 504$

42) $k^2 - 25$

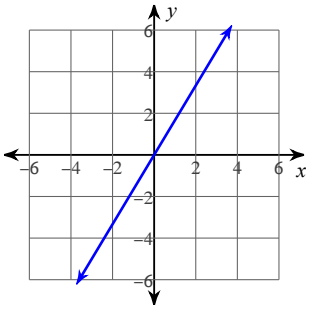
Answers to Summer Review (ID: 1)

1) 3
2) 33
3) 16
4) −22
5) −65
6) $-\frac{17}{6}$
7) $\frac{21}{10}$
8) $\frac{22}{21}$
9) $-\frac{3}{8}$
10) $-\frac{25}{12}$
11) $\frac{45}{11}$
12) $\{-7\}$
13) $\{0\}$
14) $\{-6\}$
15) No solution.
16) $4\sqrt{3}$
17) $7\sqrt{5}$
18) $14\sqrt{2}$
19) $6\sqrt{10}$
20) $-40\sqrt{13}$
21) $-98\sqrt{6}$
22) $\left(-12\frac{1}{2}, 2\right)$
23) $2\sqrt{5}$

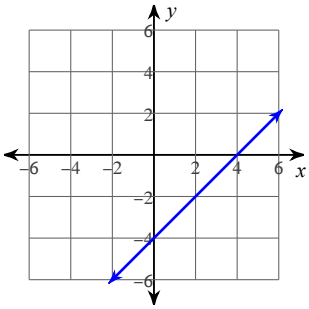
24)



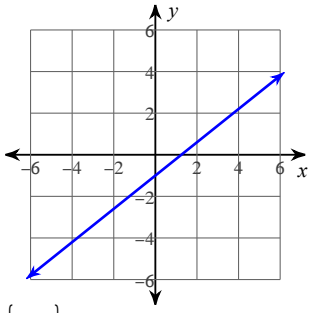
25)



26)



27)



28) $y = -\frac{5}{2}x + 2$

29) $y = \frac{1}{2}x + 3$

30) $\{7.5\}$
31) $\{1.67\}$
32) $\{-2.22\}$
33) $\{0.11\}$
34) $6v^2 + 32v + 42$
35) $4x^2 + 34x + 42$
36) $21b^2 + 28b - 49$
37) $n^3 - 18n - 35$
38) $25n^4 - 45n^3 + 34n^2 - 48n - 32$
39) $(x - 11)(x + 2)$
40) $(b - 8)^2$
41) $7(n - 12)(n + 6)$
42) $(k + 5)(k - 5)$