Geometry Name_____

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Algebra 1 Review

Date_____ Period____

Solve each equation.

1) $-1 + 8b - 5b = 20$

2) $-3p + 4p = -6$

3) $4p + 2p = 18$

4) $-23 = 7 + 4k + 2k$

5) $6(x - 7) - 6 = -90$

6) $7x + 2(4 + 8x) = -84$

7) $84 = -6(r - 6)$

8) $96 = 6(4 + 2r)$

9) $8(1 + 8b) - 3(-7b + 8) = -16$

10) $67 = 7(8x - 5) - 6(x + 8)$

Find the slope of the line through each pair of points.

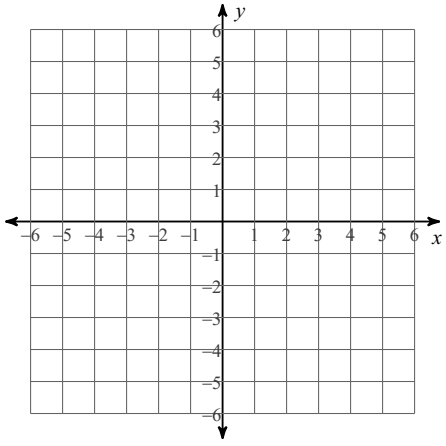
11) $(0, -14), (4, -13)$

12) $(-14, 8), (-3, 9)$

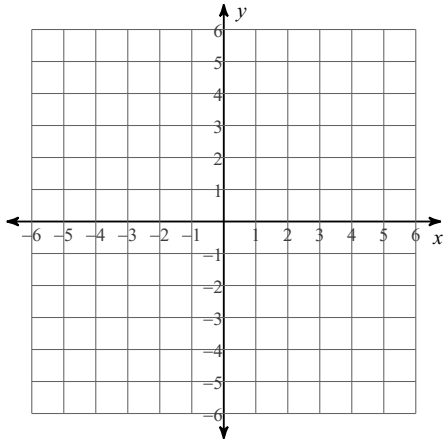
13) $(17, 6), (-17, 20)$

Sketch the graph of each line.

14) $x - 4 = 0$



15) $-x = -5y - 20$



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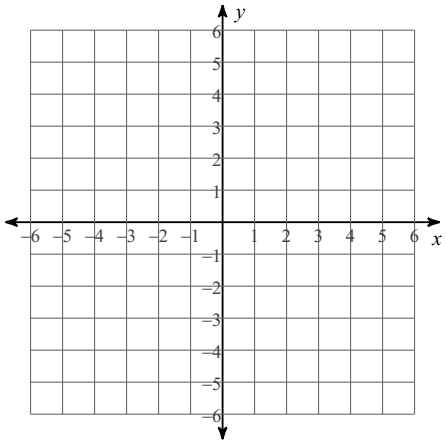
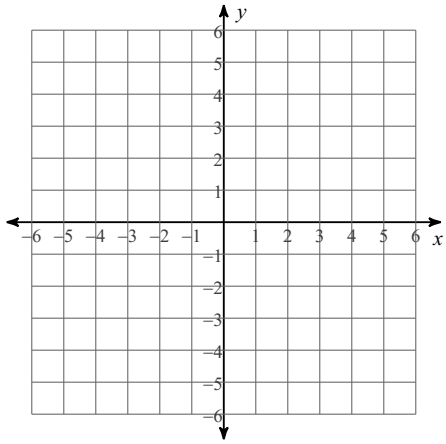
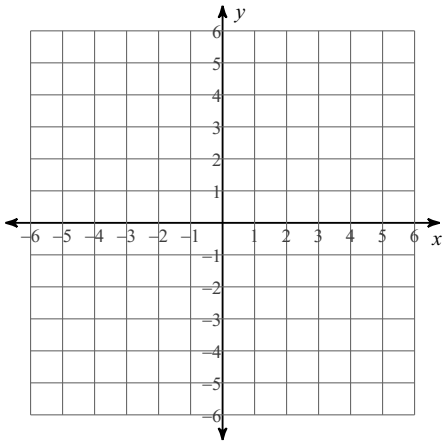
16) $0 = -y + 3x$



17) $3 - x = y$



18) $2y - 3x = -4$



Find each product.

19) $(x + 3)(2x - 4)$

20) $(n + 2)(n - 4)$

21) $(5p + 3)^2$

22) $(x + 3)(x + 1)$

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23) $(2x-4)(2x+4)$

24) $(x-2)(x-3)$

25) $(4k-1)(3k-1)$

26) $(b-3)(b+4)$

Factor each completely.

27) $n^2-11n+24$

28) $n^2+10n+16$

29) $x^2-5x-24$

30) $6p^2-35p-49$

31) $8x^2-83x+30$

Solve each equation by factoring.

32) $n^2+25=10n$

33) $x^2=5+4x$

34) $x^2=42+x$

35) $x^2=3x$

36) $n^2+2n=35$

Solve each equation with the quadratic formula.

37) $5n^2-2n=3$

38) $11b^2-19=0$

39) $-4n^2+12n=-4$

40) $p^2-17=12p$

41) $-3m^2-4m=-84$

Solve each system by elimination.

42) $-3x+9y=-9$
$-8x+18y=0$

43) $2x-4y=-16$
$-8x-y=-4$

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44) $-10x + 9y = 19$
$-20x + 18y = 22$

Solve each system by substitution.

45) $y = 6$
$2x - y = -18$

46) $3x + y = -5$
$4x + 5y = 19$

47) $-4x + y = 8$
$-12x + 3y = 24$

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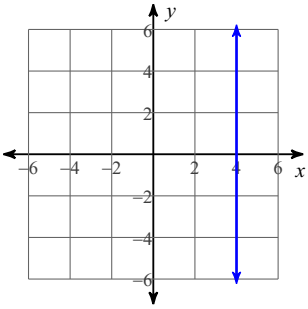
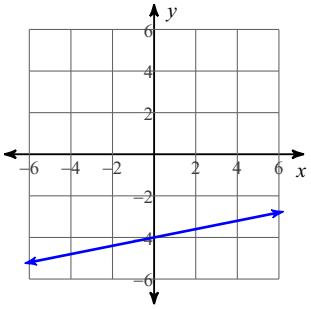
Answers to Algebra 1 Review

1) $\{7\}$
2) $\{-6\}$
3) $\{3\}$
4) $\{-5\}$
5) $\{-7\}$
6) $\{-4\}$
7) $\{-8\}$
8) $\{6\}$
9) $\{0\}$
10) $\{3\}$
11) $\frac{1}{4}$
12) $\frac{1}{11}$
13) $-\frac{7}{17}$
14)



15)



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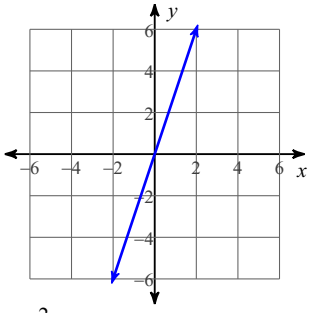

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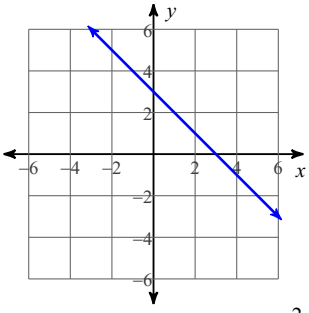
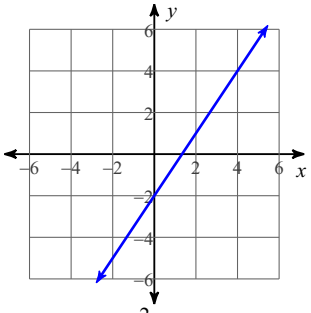


18)



19) $2x^2 + 2x - 12$
20) $n^2 - 2n - 8$
21) $25p^2 + 30p + 9$
22) $x^2 + 4x + 3$
23) $4x^2 - 16$
24) $x^2 - 5x + 6$
25) $12k^2 - 7k + 1$
26) $b^2 + b - 12$
27) $(n - 8)(n - 3)$
28) $(n + 2)(n + 8)$
29) $(x - 8)(x + 3)$
30) $(p - 7)(6p + 7)$
31) $(x - 10)(8x - 3)$
32) $\{5\}$
33) $\{-1, 5\}$
34) $\{-6, 7\}$
35) $\{3, 0\}$
36) $\{-7, 5\}$
37) $\left\{1, -\frac{3}{5}\right\}$
38) $\left\{\frac{\sqrt{209}}{11}, -\frac{\sqrt{209}}{11}\right\}$
39) $\left\{\frac{3 - \sqrt{13}}{2}, \frac{3 + \sqrt{13}}{2}\right\}$
40) $\{6 + \sqrt{53}, 6 - \sqrt{53}\}$
41) $\left\{-6, 4\frac{2}{3}\right\}$
42) $(-9, -4)$
43) $(0, 4)$
44) No solution
45) $(-6, 6)$
46) $(-4, 7)$
47) Infinite number of solutions

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