

**Algebra II Summer Review****Simplify each expression.**

1)  $8p(-2 - 7p)$

2)  $7(1 + 10k)$

**Solve each linear equation.**

3)  $-7p + 5 + 5 = 24$

4)  $-14 = x - 7 - 2x$

5)  $-8x + 3x = -20$

6)  $-6(1 - 8k) = 378$

7)  $-4(6n - 5) - 3 = -127$

8)  $-7.8(r + 7.5) = -116.22$

9)  $4(-5.98 - 2.6r) = -92.56$

**Evaluate each function.**

10)  $k(n) = n - 1$ ; Find  $k(-5)$

11)  $w(x) = x^2 - 5x$ ; Find  $w(2)$

12)  $p(a) = a^2 + 5a$ ; Find  $p(6)$

**Find each product.**

13)  $(-v - 8)(4v - 7)$

14)  $(2b - 8)(-5b + 4)$

15)  $(-3x^2 - 6x - 6)(-x + 5)$

**Factor each expression completely.**

16)  $m^2 + 9m + 20$

17)  $n^2 - 17n + 70$

18)  $a^2 - 6a - 40$

19)  $3x^2 - 20x + 12$

20)  $3b^2 + b - 30$

21)  $10r^4 - 18r^3$

**Factor each expression completely. (special cases)**

22)  $9p^2 - 1$

23)  $25m^2 - 9$

24)  $4x^2 - 12x + 9$

**Simplify each expression.**

25)  $(6n^3 - 5n^4 + 4) - (4n^4 + 4 + 5n^3)$

26)  $(2v^2 - 6v^4 + 4v) - (3v + 6v^2 + 8v^4)$

27)  $(7a + 6 - 7a^2) - (a^2 - 1 - 2a)$

**Simplify each radical to its lowest terms.**

28)  $\sqrt{24}$

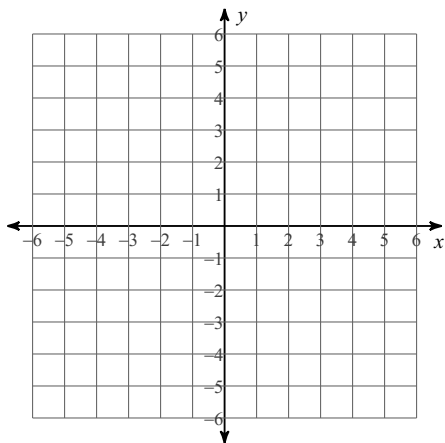
29)  $\sqrt{32}$

30)  $\sqrt{256}$

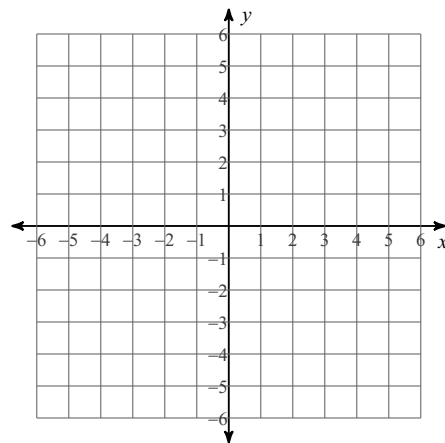
31)  $\sqrt{98}$

**Sketch the graph of each line.**

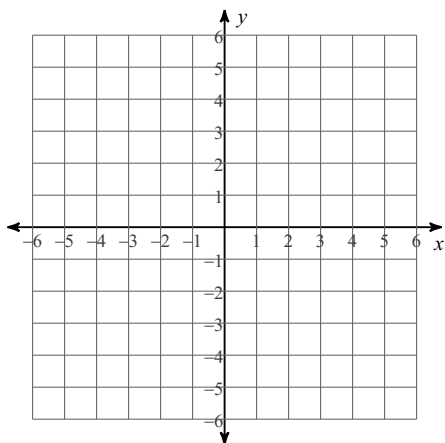
32)  $y = -x - 3$



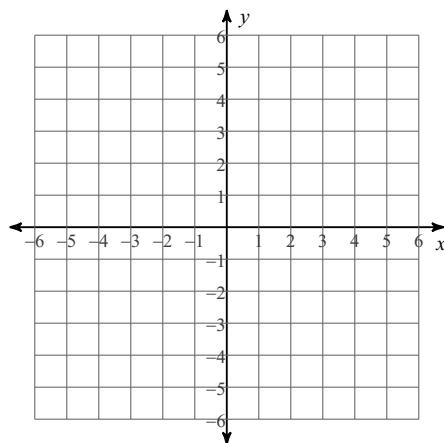
33)  $y = 2x + 4$



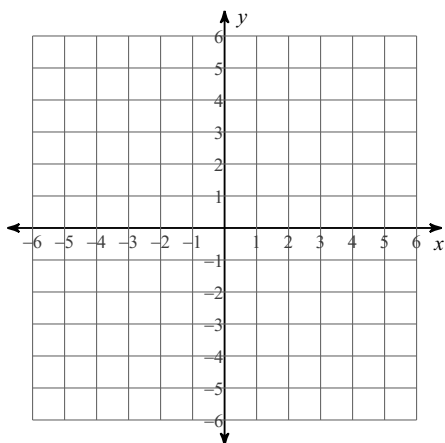
34)  $y = -3x - 3$



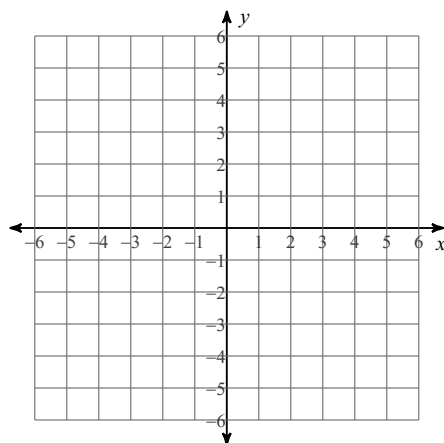
35)  $x - 5y = -10$



36)  $x + 2y = -10$

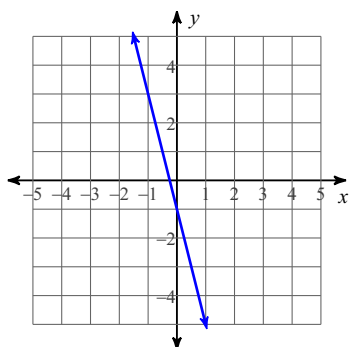


37)  $y = -4$

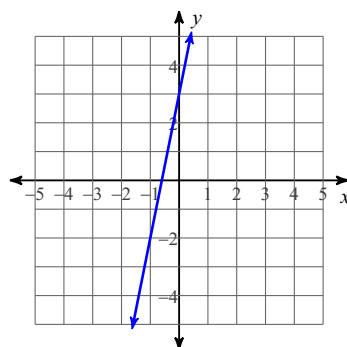


**Write the slope-intercept form of the equation of each line.**

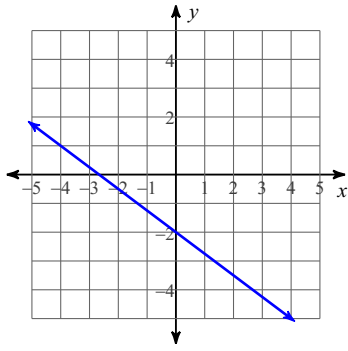
38)



39)



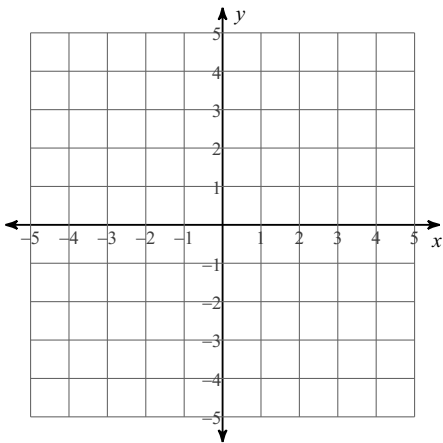
40)



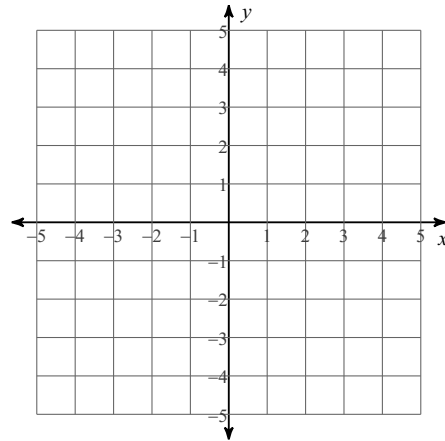
Solve each system by graphing.

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

$y = \frac{5}{3}x - 1$

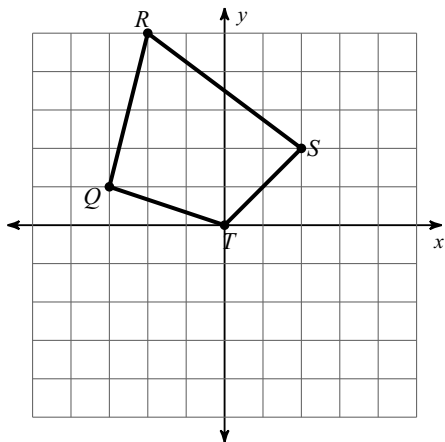


42)  $y = -7x - 4$   
 $y = -x + 2$

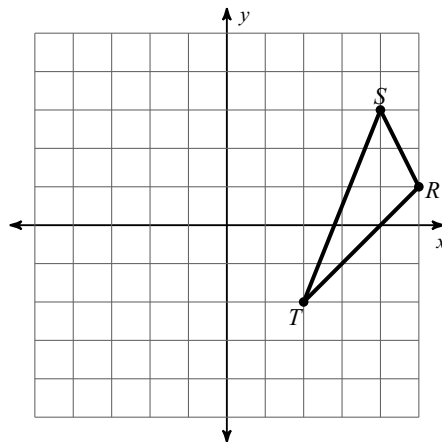


Graph the image of the figure using the transformation given.

43) translation: 1 unit right and 3 units down

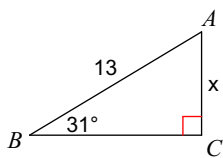


44) reflection across the y-axis

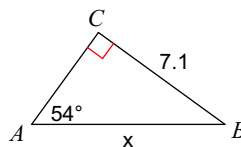


Find the measure of each side indicated. Round to the nearest tenth.

45)

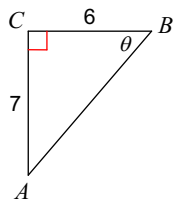


46)

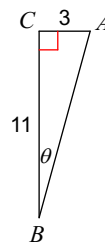


Find the measure of each angle indicated. Round to the nearest tenth.

47)

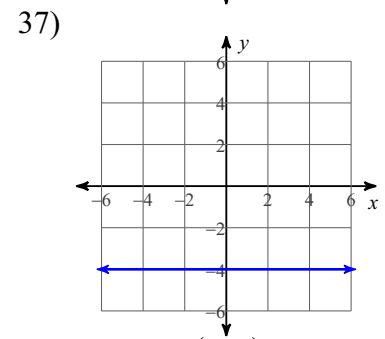
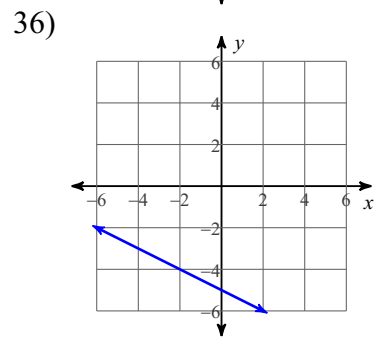
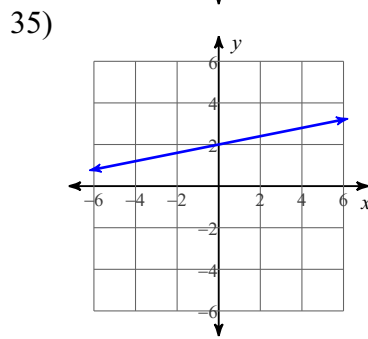
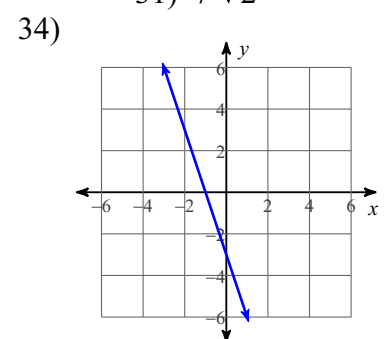
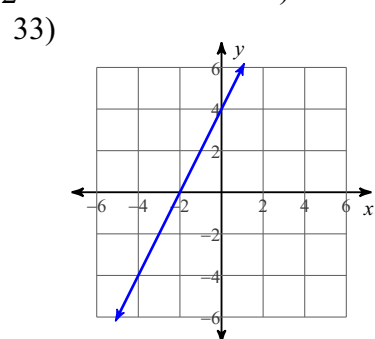
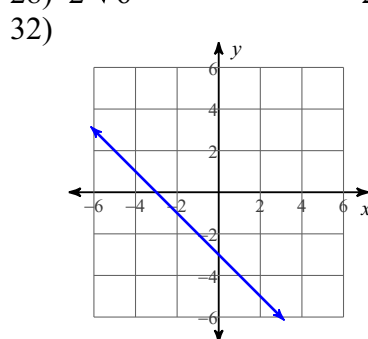


48)



## Answers to Algebra II Summer Review

- |                        |                         |                              |                        |
|------------------------|-------------------------|------------------------------|------------------------|
| 1) $-16p - 56p^2$      | 2) $7 + 70k$            | 3) $\{-2\}$                  | 4) $\{7\}$             |
| 5) $\{4\}$             | 6) $\{8\}$              | 7) $\{6\}$                   | 8) $\{7.4\}$           |
| 9) $\{6.6\}$           | 10) $-6$                | 11) $-6$                     | 12) $66$               |
| 13) $-4v^2 - 25v + 56$ | 14) $-10b^2 + 48b - 32$ | 15) $3x^3 - 9x^2 - 24x - 30$ |                        |
| 16) $(m + 5)(m + 4)$   | 17) $(n - 7)(n - 10)$   | 18) $(a + 4)(a - 10)$        | 19) $(3x - 2)(x - 6)$  |
| 20) $(3b + 10)(b - 3)$ | 21) $2r^3(5r - 9)$      | 22) $(3p + 1)(3p - 1)$       | 23) $(5m + 3)(5m - 3)$ |
| 24) $(2x - 3)^2$       | 25) $-9n^4 + n^3$       | 26) $-14v^4 - 4v^2 + v$      | 27) $-8a^2 + 9a + 7$   |
| 28) $2\sqrt{6}$        | 29) $4\sqrt{2}$         | 30) $16$                     | 31) $7\sqrt{2}$        |



38)  $y = -4x - 1$

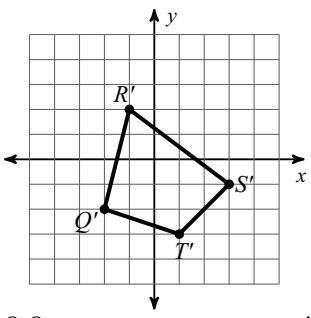
39)  $y = 5x + 3$

40)  $y = -\frac{3}{4}x - 2$

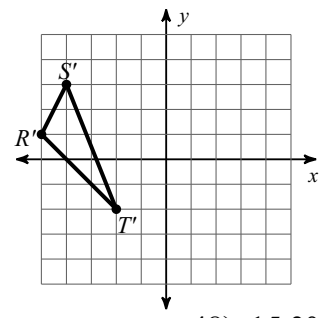
41)  $(3, 4)$

42)  $(-1, 3)$

43)



44)



45)  $6.7$

46)  $8.8$

47)  $49.4^\circ$

48)  $15.3^\circ$