

## Summer Review Assignment

Date \_\_\_\_\_ Period \_\_\_\_\_

**Simplify each expression.**

1)  $7(-6x - 6) - 8x$

2)  $-5 + 5(8 - 6v)$

3)  $2 - 7(2 + a)$

4)  $5n + 8(7n + 1)$

5)  $-6(k + 6) + 8$

**Find the distance between each pair of points.**

6)  $(-4, 5), (-2, 6)$

7)  $(0, -7), (-4, -3)$

8)  $(6, -7), (-2, -4)$

9)  $(3, -3), (1, -3)$

10)  $(-8, -3), (3, -5)$

**Solve each equation.**

11)  $-6(x + 7) + 5 = -8x - 29$

12)  $-3(1 + 7b) = 20 + 2b$

13)  $-33 - 7n = -5(1 + 7n)$

14)  $-2(v + 6) = 8 + 2v$

15)  $19 - 5x = -7(6x - 8)$

**Factor each completely.**

16)  $x^2 + 4x$

17)  $x^2 + x$

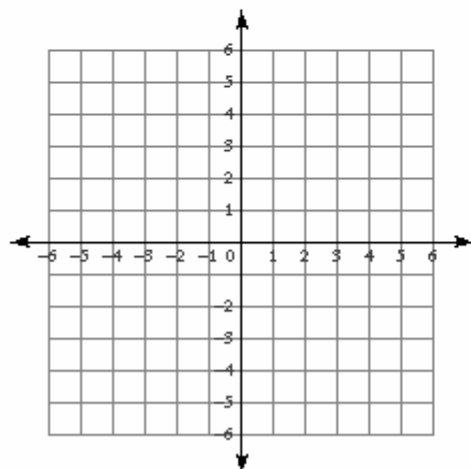
18)  $x^2 + 7x - 8$

19)  $5x^2 - 5x - 450$

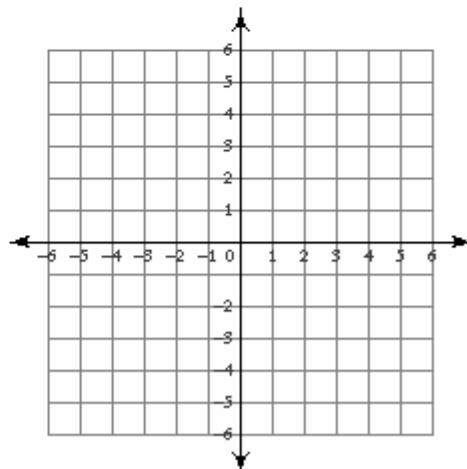
20)  $5k^2 - 10k - 175$

**Sketch the graph of each line.**

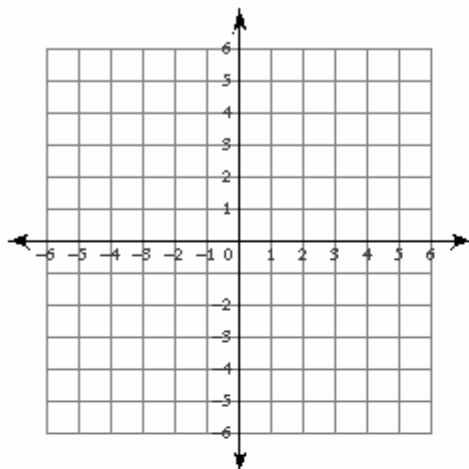
21)  $y = 2x - 5$



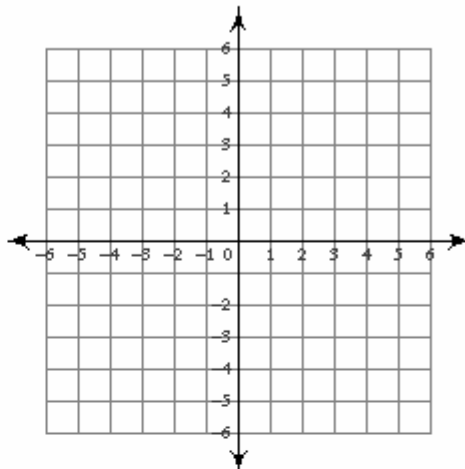
22)  $y = x - 4$



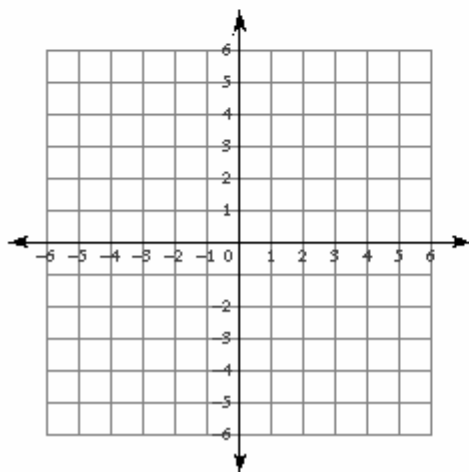
$$23) y = -\frac{1}{2}x + 3$$



$$24) y = -\frac{3}{2}x$$



$$25) y = \frac{2}{5}x - 2$$



**Solve each proportion.**

$$26) \frac{v-11}{v+2} = \frac{3}{6}$$

$$27) \frac{10}{x+1} = \frac{3}{x+10}$$

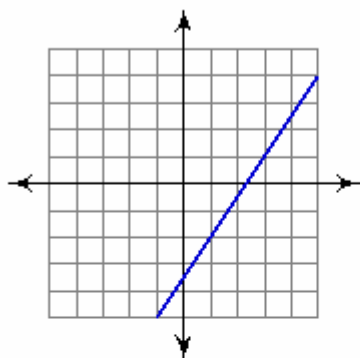
$$28) \frac{9}{n-1} = \frac{4}{n+6}$$

$$29) -\frac{12}{3} = \frac{a+5}{a-5}$$

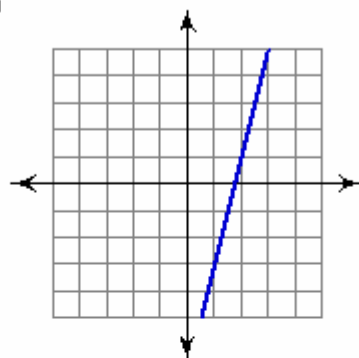
$$30) \frac{k+3}{7} = \frac{k-9}{9}$$

Find the slope of each line.

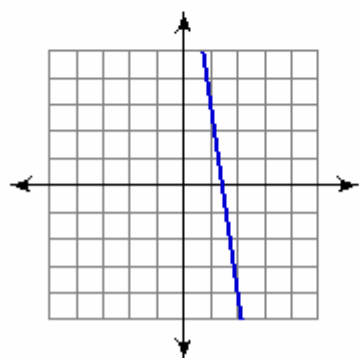
31)



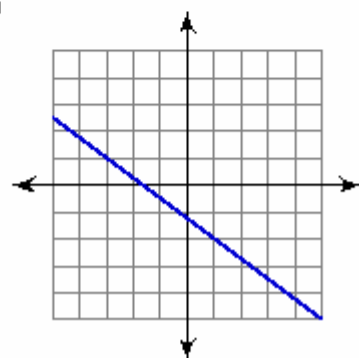
32)



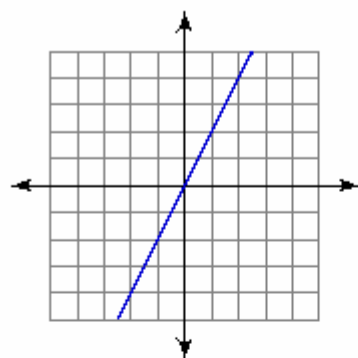
33)



34)



35)



Find the slope of a line perpendicular to each given line.

36)  $7x = -3y - 9$

37)  $-4 - 2y = -x$

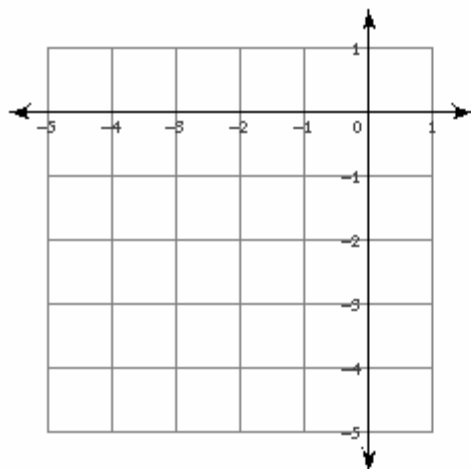
38)  $-1 - y = x$

39) Sumalee and Pranav each improved their yards by planting rose bushes and ivy. They bought their supplies from the same store. Sumalee spent \$68 on 4 rose bushes and 4 pots of ivy. Pranav spent \$115 on 5 rose bushes and 8 pots of ivy. Find the cost of one rose bush and the cost of one pot of ivy.

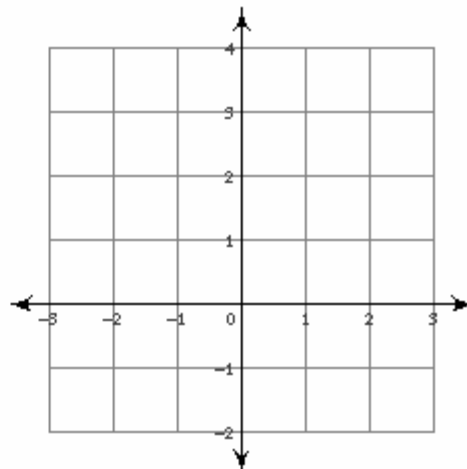
40) Anjali's school is selling tickets to a choral performance. On the first day of ticket sales the school sold 10 senior citizen tickets and 3 student tickets for a total of \$165. The school took in \$150 on the second day by selling 5 senior citizen tickets and 6 student tickets. Find the price of a senior citizen ticket and the price of a student ticket.

Sketch the graph of each function.

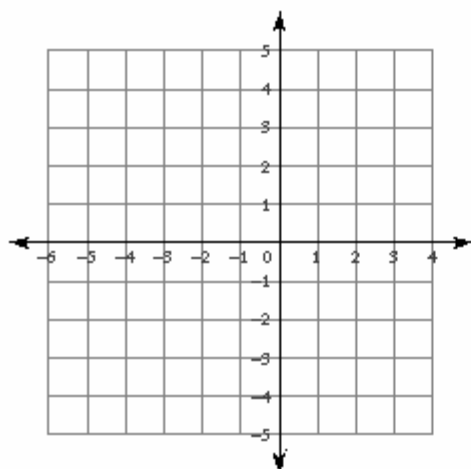
41)  $y = x^2 + 2x - 3$



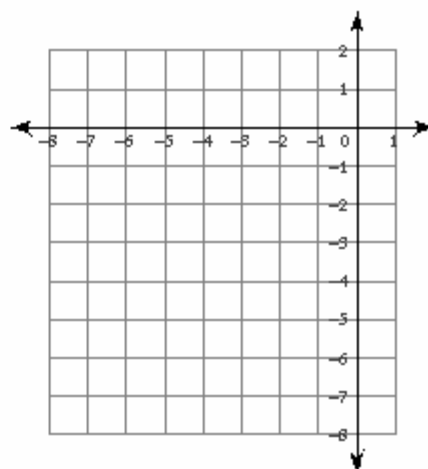
42)  $y = -x^2 - 2x + 2$



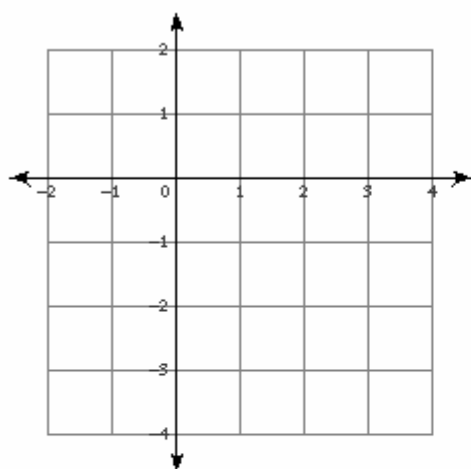
43)  $y = -2x^2 - 4x + 2$



44)  $y = -2x^2 - 16x - 31$



45)  $y = x^2 - 2x - 2$



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

46)  $(-20, -7), (-11, 4)$

47)  $(8, -19), (-20, -13)$

48)  $(5, 1), (12, 2)$

49)  $(-8, -10), (2, -16)$

50)  $(20, 10), (-7, 8)$

## Answers to Summer Review Assignment

1)  $-50x - 42$

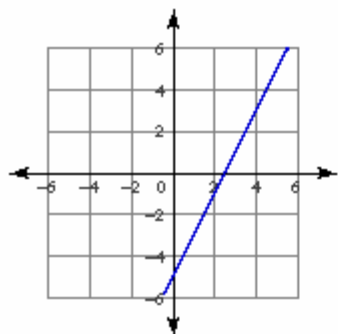
5)  $-6k - 28$

9) 2

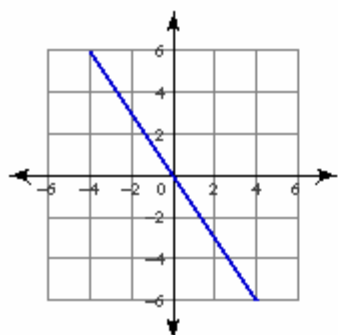
13)  $\{1\}$

17)  $x(x+1)$

21)



24)



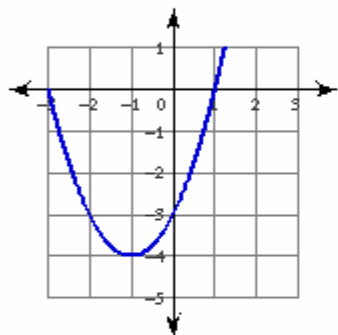
27)  $\{-13.85\}$

31)  $\frac{3}{2}$

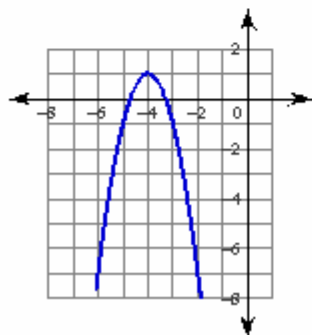
35) 2

39) rose bush: \$7, pot of ivy: \$10

41)



44)



2)  $35 - 30v$

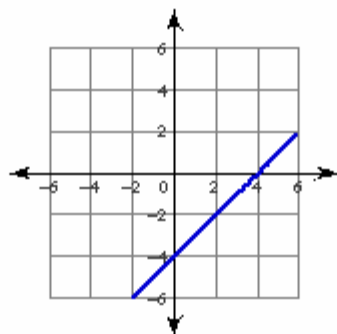
6)  $\sqrt{5}$

10)  $5\sqrt{5}$

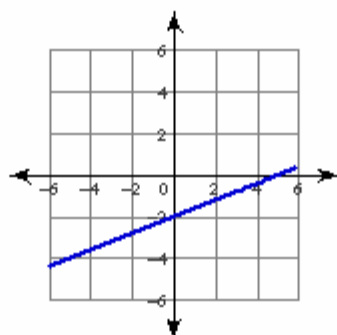
14)  $\{-5\}$

18)  $(x+8)(x-1)$

22)



25)



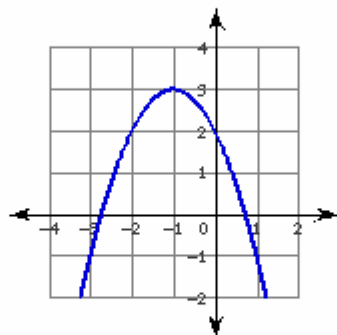
28)  $\{-11.6\}$

32) 4

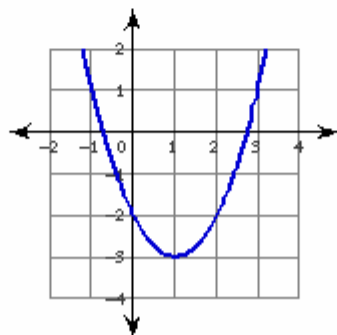
36)  $\frac{3}{7}$

40) senior citizen ticket: \$12, student ticket: \$15

42)



45)



3)  $-12 - 7a$

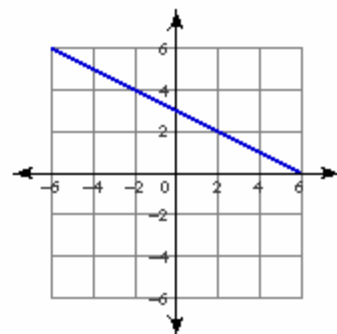
7)  $4\sqrt{2}$

11)  $\{4\}$

15)  $\{1\}$

19)  $5(x-10)(x+9)$

23)



26)  $\{24\}$

4)  $61n + 8$

8)  $\sqrt{73}$

12)  $\{-1\}$

16)  $x(x+4)$

20)  $5(k-7)(k+5)$

29)  $\{3\}$

33) -7

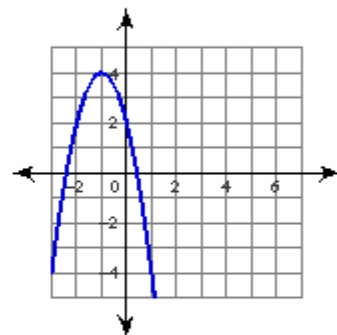
37) -2

30)  $\{-45\}$

34)  $-\frac{3}{4}$

38) 1

43)



46)  $\frac{11}{9}$

47)  $-\frac{3}{14}$

48)  $\frac{1}{7}$

49)  $-\frac{3}{5}$

50)  $\frac{2}{27}$