

## 4.2.D1 ~ Sequences

Past due on \_\_\_\_\_ Period \_\_\_\_\_

**Determine if the sequence is arithmetic. If it is, find the common difference. Refer to the 4.2 example "Recognizing Arithmetic Sequences and Determining the Common Difference" in the Chapter 4 Summary.**

1)  $-31, -22, -13, -4, \dots$

2)  $-19, -22, -25, -28, \dots$

3)  $17, 10, 3, -4, \dots$

4)  $24, 28, 32, 36, \dots$

**Determine the next 3 terms in each arithmetic sequence.**

5)  $16, 10, 4, -2, \dots$

6)  $-32, -25, -18, -11, \dots$

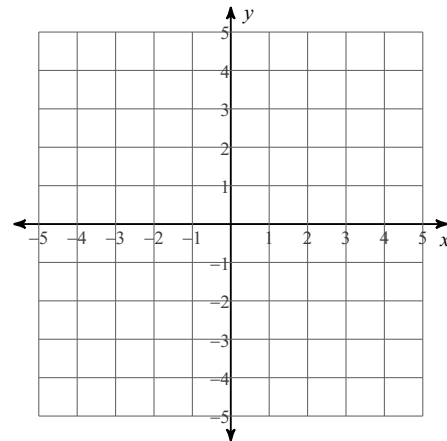
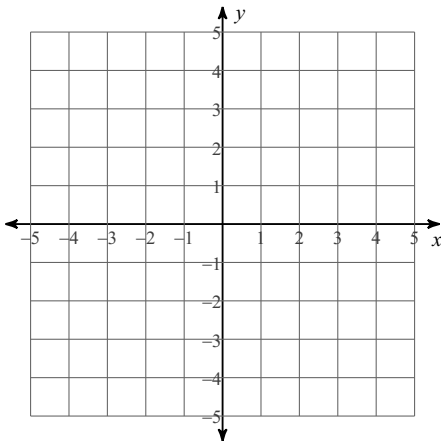
7)  $2, 9, 16, 23, \dots$

8)  $-10, 10, 30, 50, \dots$

**Graph each system of linear inequalities. Refer to the 7.2 example "Graphing a System of Linear Inequalities" in the Chapter 7 Summary.**

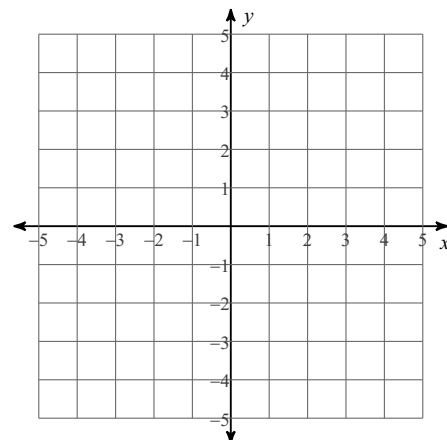
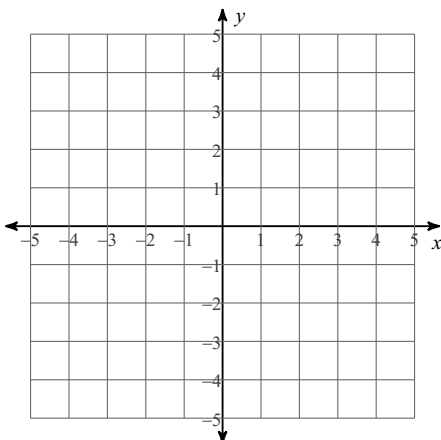
9)  $y < 2x + 1$   
 $y < -x - 2$

10)  $y < -4x - 3$   
 $y \geq x + 2$



11)  $x + 3y < 3$   
 $5x + 3y < -9$

12)  $x - y \geq -3$   
 $x + y \geq 1$



Solve each system of equations using substitution or linear combinations. Write your solution as an ordered pair  $(x, y)$ . Refer to the 6.1 example “Solving Systems of Linear Equations Using the Substitution Method” or the 6.2 example “Solving a System of Equations Using the Linear Combinations Method” in the Chapter 6 Summary.

13)  $x - 4y = 2$   
 $x - 11y = -5$

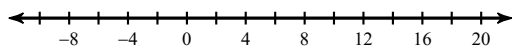
14)  $4x - 4y = -32$   
 $-x + 2y = 4$

15)  $x + 2y = -13$   
 $2x - 2y = -2$

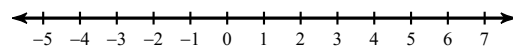
16)  $5x - 10y = -20$   
 $2x + 8y = 16$

Solve each compound inequality and graph its solution set. Refer to the 2.4 example “Solving Compound Inequalities” in the Chapter 2 Summary.

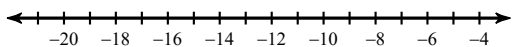
17)  $-9x + 19 \leq -116$  or  $7 - 7x > 49$



18)  $-30 < -12 + 18n < 78$



19)  $-293 \leq 15b - 8 \leq -113$



20)  $13 + 5n > 53$  or  $20 + 11n \leq 53$

