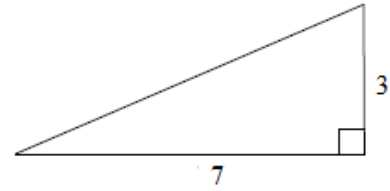


Secondary 1 Term 3 Review

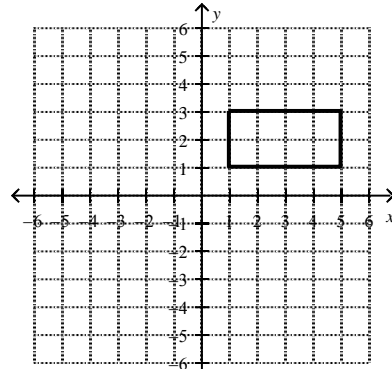
Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_ Teacher: \_\_\_\_\_

Section 1: Free Response: Answer the following questions. Show all your work.

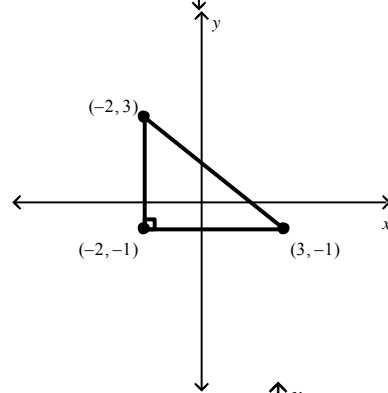
1. Use the Pythagorean Theorem to find the missing side length.



2. What is the perimeter of the shape at right?



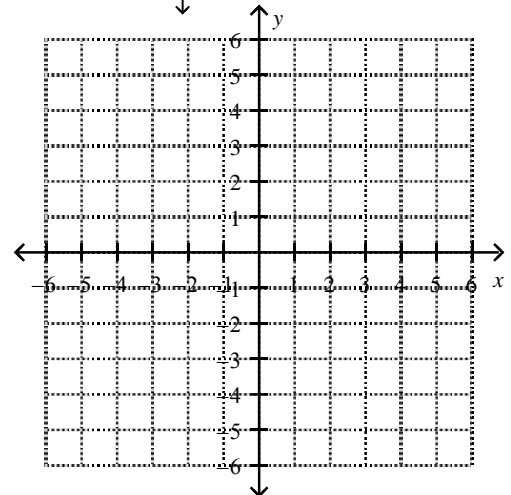
3. What is the area of the triangle at right?



4. Graph the quadrilateral with the given vertices.

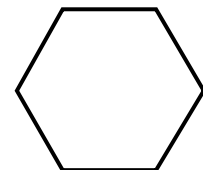
What is the most specific name for the quadrilateral?

Vertices: A (-4, 2), B (1, 2), C (2, -1), D (-3, -5)



Use the figure at the right to answer the following.

5. Draw in the lines of reflectional symmetry. How many are there?

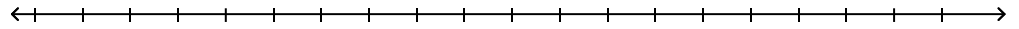


6. What is the angle of rotational symmetry?

Use the following data of the ages of students in a college class to answer questions 7 – 12.

18, 21, 24, 22, 19, 23, 18, 19, 20, 17, 23, 19, 18, 21, 22, 19, 19, 20, 21

7. Make a dot plot. Tell which age occurs the most frequently.



8. What is the range?

9. What is the interquartile-range (IQR)?

10. What is the mean?

11. What is the median?

12. What is the standard deviation?

13. There are two different data sets (Set 1 and Set 2). The standard deviation of Data Set 1 is 4.5. The standard deviation of Data Set 2 is 1.6. How do the two data sets compare?

Use the data below about how Absences affect your grade to answer questions 14 – 19.

Absences	6	2	15	9	12	5	8	10	20
Final Grade	82	98	43	74	58	90	78	70	23

14. Make a scatter plot of the data on your calculator. Which kind of regression would be most appropriate for the situation?

15. What is the linear regression equation?

16. What is the slope? What does it mean in terms of absences and grades?

17. What is the y-intercept? What does it mean in terms of absences and grades?

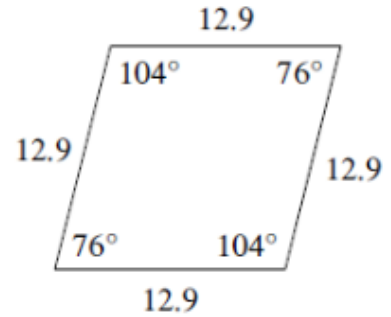
18. What is the correlation coefficient? What kind of correlation is there between absences and grades?

19. Is there a causal relationship between absences and grade earned? If so, what is it?

Section 2: Multiple Choice: Choose the best answer for each question. Show all your work.

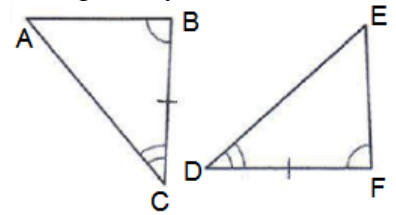
20. What is the most specific name of the figure at right?

- a. Quadrilateral
- b. Rhombus
- c. Rectangle
- d. Square

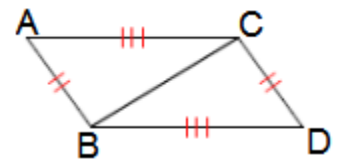


Decide if the following triangles are congruent. If they are congruent, tell which congruency rule is used.

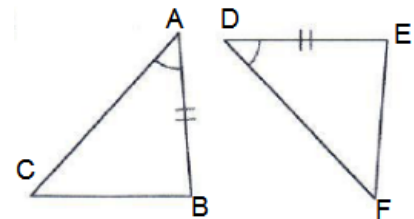
- 21.
- a. Congruent by SAS
  - b. Congruent by AAS
  - c. Congruent by ASA
  - d. There is not enough information to prove congruency



- 22.
- a. Congruent by SSS
  - b. Congruent by SAS
  - c. Congruent by ASA
  - d. There is not enough information to prove congruency

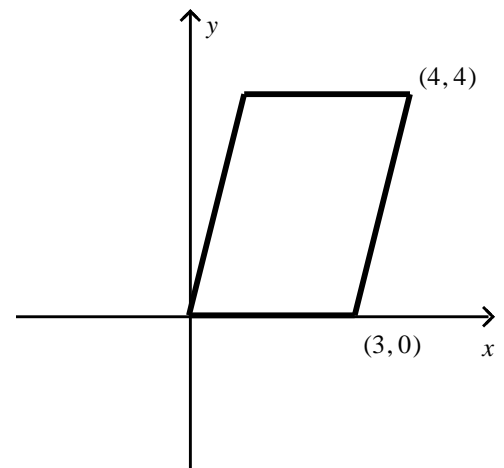


- 23.
- a. Congruent by ASA
  - b. Congruent by SAS
  - c. Congruent by AAS
  - d. There is not enough information to prove congruency.



24. What are the missing vertices on the quadrilateral at right.

- a. (0, 0) and (1, 4)
- b. (0, 0) and (3, 4)
- c. (3, 3) and (1, 4)
- d. (3, 3) and (3, 4)



Secondary 1 Term 4 Review

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_ Teacher: \_\_\_\_\_

Section 1: Free Response: Answer the following questions. Show all your work.

Use the sequence below to answer the following questions:

-3, -6, -12, -24, ...

1. What is  $f(1)$ ?                      2. What is  $f(4)$ ?                      3. What is  $f(6)$ ?                      4. What is  $f(0)$ ?

5. Is the sequence arithmetic or geometric? How do you know?

6. Write the recursive function.                      7. Write the explicit function.                      8. What is  $f(8)$ ?

Use the sequence below to answer the following questions:

12, 15, 18, 21, ...

9. What is  $f(1)$ ?                      10. What is  $f(4)$ ?                      11. What is  $f(6)$ ?                      12. What is  $f(0)$ ?

13. Is the sequence arithmetic or geometric? How do you know?

14. Write the recursive function.                      15. Write the explicit function.                      16. What is  $f(8)$ ?

Use the function below to answer the following questions:

$$f(0) = 1, \quad f(n+1) = f(n) \cdot 3$$

17. What are the first 3 terms of the sequence?

18. Is the sequence arithmetic or geometric? How do you know?

19. Write the explicit function for the sequence.

Use the sequence below to answer the following questions:

2, 10, ...

20. If the sequence is arithmetic, what are the next three terms?

21. What is the recursive function?

22. What is the explicit function?

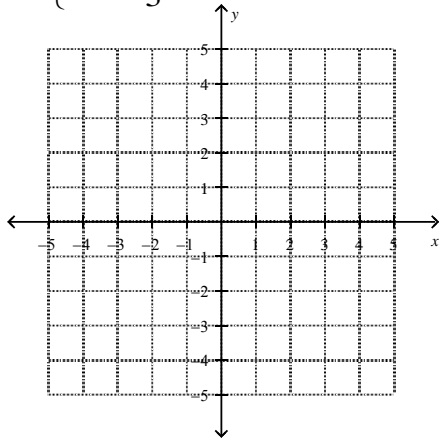
23. If the sequence is geometric, what are the next three terms?

24. What is the recursive function?

25. What is the explicit function?

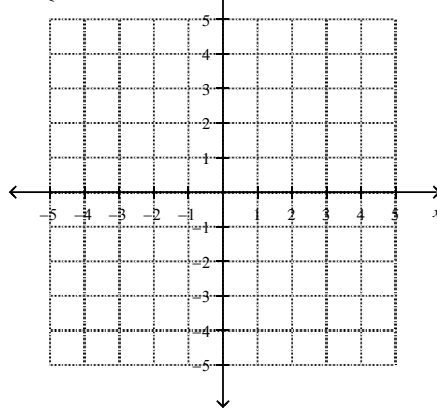
Solve the following systems by graphing. Be sure to state the solutions.

26. 
$$\begin{cases} y = x \\ y = -\frac{1}{3}x + 4 \end{cases}$$



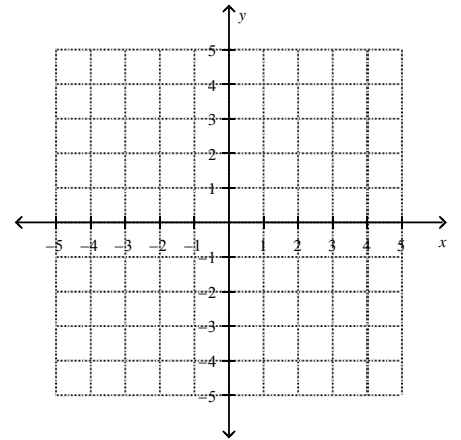
Solution:

27. 
$$\begin{cases} y = \frac{1}{2}x + 1 \\ y = -\frac{1}{4}x + 4 \end{cases}$$



Solution:

28. 
$$\begin{cases} y = -x + 3 \\ y = 3(2)^x \end{cases}$$



Solution:

Solve the following systems of equations using substitution or elimination.

29. 
$$\begin{cases} y = -2 \\ 4x - 3y = 18 \end{cases}$$

30. 
$$\begin{cases} y = -x - 3 \\ y = -5x - 15 \end{cases}$$

31. 
$$\begin{cases} y = 2x - 3 \\ 2x - 4y = -6 \end{cases}$$

**Section 2: Multiple Choice: Choose the best answer for each question. Show all your work.**

**Use the sequence below to answer the following questions:**

**-5, -6, -7, -8, ...**

39. What is  $f(1)$ ?  
a. -4      b. -5      c. -7      d. -8
40. What is  $f(4)$ ?  
a. -6      b. -7      c. -8      d. -9
41. What is  $f(6)$ ?  
a. -10      b. -9      c. -11      d. -8
42. What is  $f(0)$ ?  
a. -5      b. -4      c. -7      d. -8
43. Is the sequence arithmetic or geometric? How do you know?  
a. Arithmetic, it is multiplying by 1.2 each term.  
b. Geometric, it is multiplying by 1.2 each term.  
c. Geometric, it is adding -1 each term.  
d. Arithmetic, it is adding -1 each term.

**Use the sequence below to answer the following questions:**

**270, 90, 30, 10, ...**

47. What is  $f(1)$ ?  
a. 270      b. 810      c. 90      d. 10
48. What is  $f(4)$ ?  
a. 270      b. 10      c. 30      d.  $3.\overline{33}$
49. What is  $f(6)$ ?  
a.  $1.\overline{11}$       b.  $3.\overline{33}$       c.  $0.\overline{370}$       d. 10
50. What is  $f(0)$ ?  
a. 30      b. 90      c. 270      d. 810
51. Is the sequence arithmetic or geometric? How do you know?  
a. Geometric, it is multiplying by  $\frac{1}{3}$  each term.  
b. Arithmetic, it is adding by -180 each term.  
c. Geometric, it is adding by -180 each term.  
d. Arithmetic, it is multiplying by  $\frac{1}{3}$  each term.

52. Write the recursive function.

a.  $f(0) = 810, f(n+1) = f(n) \cdot \frac{1}{3}$

b.  $f(1) = 810, f(n+1) = f(n) \cdot \frac{1}{3}$

c.  $f(0) = 810, f(n+1) = f(n) - 180$

d.  $f(1) = 810, f(n+1) = f(n) - 180$

53. Write the explicit function.

a.  $f(x) = -180x + 810$

b.  $f(x) = -180x + 270$

c.  $f(x) = 810\left(\frac{1}{3}\right)^x$

d.  $f(x) = 270\left(\frac{1}{3}\right)^x$

54. Approximate  $f(8)$ .

a. 0.041

b. 1.111

c. 0.370

d. 0.123