

4.2.D2 ~ Sequences

Past due on _____ Period _____

Determine if the sequence is geometric. If it is, find the common ratio. Refer to the 4.2 example "Recognizing Geometric Sequences and Determining the Common Ratio" in the Chapter 4 Summary.

1) $-4, 8, -16, 32, \dots$

2) $-2, -6, -18, -54, \dots$

3) $-4, 20, -100, 500, \dots$

4) $-2, -8, -32, -128, \dots$

Determine the next 3 terms in each geometric sequence.

5) $3, 9, 27, 81, \dots$

6) $-1, 3, -9, 27, \dots$

7) $-1, 5, -25, 125, \dots$

8) $-3, -6, -12, -24, \dots$

Determine whether each given sequence is arithmetic, geometric, or neither.

9) $-40, -34, -28, -22, -16, \dots$

10) $4, -24, 144, -864, 5184, \dots$

11) $-1, 2, 7, 14, 23, \dots$

12) $-1.5, -3, -6, -12, -24, \dots$

The Pizza Barn sells Murphy 3 large pepperoni pizzas and 2 orders of breadsticks for \$30. They sell Lucy 4 large pepperoni pizzas and 3 orders of breadsticks for \$41. Let x = the cost of the pizza and let y = the cost of the breadsticks.

13) Write an equation that represents the total cost of Murphy's order.

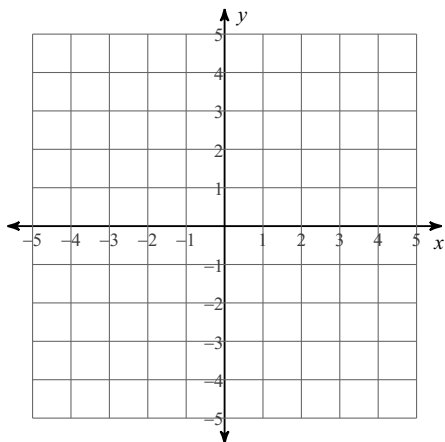
14) Write an equation that represents the total cost of Lucy's order.

15) Solve the system formed by the equations (in problems 13 & 14).

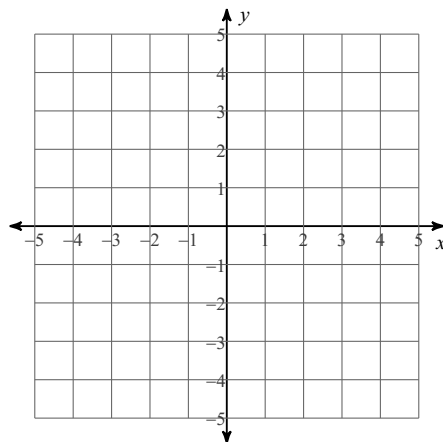
16) Interpret the solution of the linear system in terms of the problem situation.

Solve the system of linear equations graphically. Write your solution as an ordered pair (x, y) . Refer to the 6.1 example “Predicting the Solution of a System Using Graphing” in the Chapter 6 Summary.

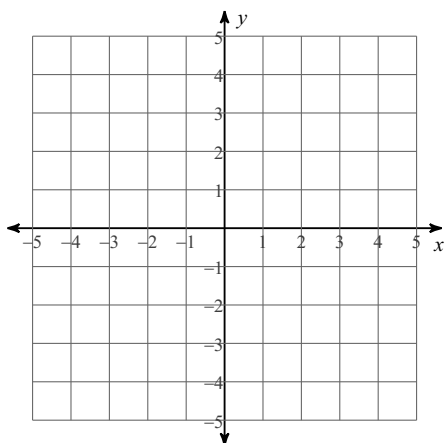
17) $y = \frac{1}{4}x + 3$
 $y = -x - 2$



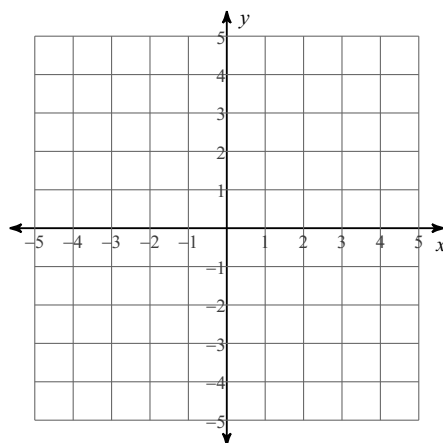
18) $y = -\frac{3}{2}x + 4$
 $y = x - 1$



19) $5x + 2y = 6$
 $x - y = 4$



20) $x + 4y = 12$
 $x - y = 2$



First write the point-slope form of the equation of the line. Then convert it to slope-intercept form.

21) through: $(3, -4)$, slope = -2

22) through: $(-2, -5)$, slope = 10