

Name: _____

Chapter Homework Problems

Dependent and Independent Variables

Day 1

Identify the independent and the dependent variable in each scenario.

- 1) The older John gets, the taller he is.
- 2) The more gallons of milk I have, the more cups of milk I have.
- 3) In the United States House of representatives, the number of Representatives from a state is calculated based on its population.
- 4) The number of seats in a movie theater determines how many tickets can be sold.
- 5) As a plane descends, the more time that passes, the lower the plane's altitude is.
- 6) It costs \$0.99 for a music download. The more music I download, the more money I spend.

Day 2

Identify the independent and the dependent variable in each scenario.

- 7) The more tickets I sell, the more money I have.
- 8) Judah brings reusable shopping bags from home whenever he goes to the grocery store. The number of bags he brings is based on how many products are on his shopping list.
- 9) At a deli counter, the price of a customer's order is based on its weight.
- 10) Vera and Elizabeth are going hiking and are trying to figure out how many snacks they should bring with them on the hike. The longer they plan to hike, the more snacks they should bring.
- 11) Amelia is making mushroom tarts for a party. The number of tarts she can make will be determined by how many mushrooms are in the fridge.
- 12) Taylor's dad is building a case for his trophies. The number of trophies will determine how many shelves the case will have.

Equations and Tables

Day 1

- 13) The table shows the relationship between the age of a plant in weeks, w , and the height of the plant in cm, h . Write an equation to represent this relationship.

w	h
1	12
2	24
3	36
4	48

- 14) Predict the plant's height in cm when it is 8 weeks old.

- 15) The table shows the relationship between the number of cups, c , and the number of gallons, g . Write an equation to represent this relationship.

g	c
1	16
2	32
3	48
4	64

- 16) How many gallons will 128 cups make?

- 17) The following table represents the equation $m = 3a$. Fill in the missing values.

a	m
5	
7	
	24
	30

- 18) Hillary, h , is 15 years older than Gavin, g . Write an equation to represent this situation. Then complete the table.

g	h
15	
30	
	50
	60

Day 2

- 19) The table shows the relationship between the pounds of dough prepared, p , and the number of hours worked, h . Write an equation to represent this relationship.

h	p
9	27
10	30
11	33
12	36

- 20) Predict how many pounds of dough will be prepared after 24 hours.

- 21) The table shows the relationship between the minutes Vanessa spends walking, m , and the number of laps around the track she completes, c . Write an equation to represent this relationship.

c	m
3	18
5	30
6	36
8	48

- 22) If she keeps walking at this rate, how many laps will she have completed after 72 minutes?

23) The following table represents the equation $y = x - 4$. Fill in the missing values.

x	y
5	
7	
	24
	30

24) Ella's birthday party costs \$3 for every guest she invites. Write an equation that shows the relationship between the guests, g , and the cost, c . Then complete the table.

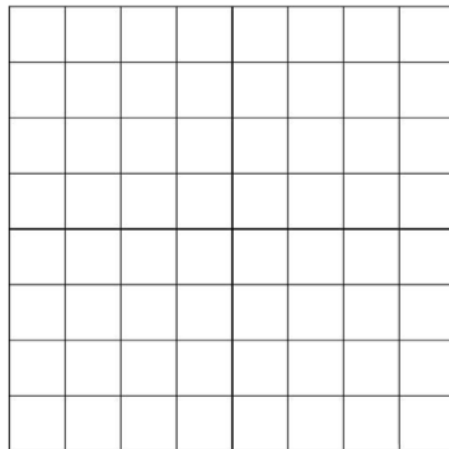
g	c
5	
10	
15	
20	

Graphing Equations

Day 1

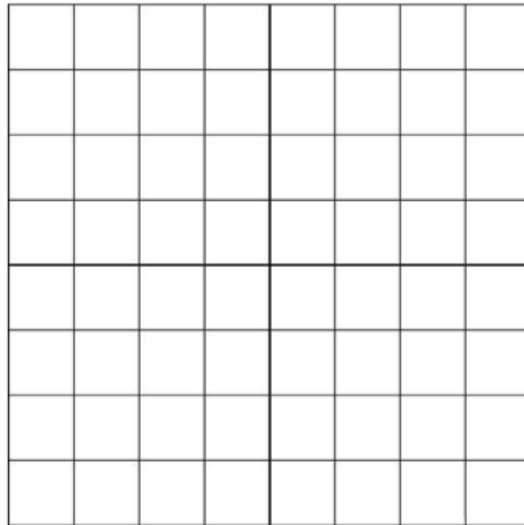
25) Graph the data given in the table below. Make sure the scale you choose is appropriate for the data and be sure to use a break in the graph if it is necessary.

a	b
3	35
6	40
9	45
12	50
15	55

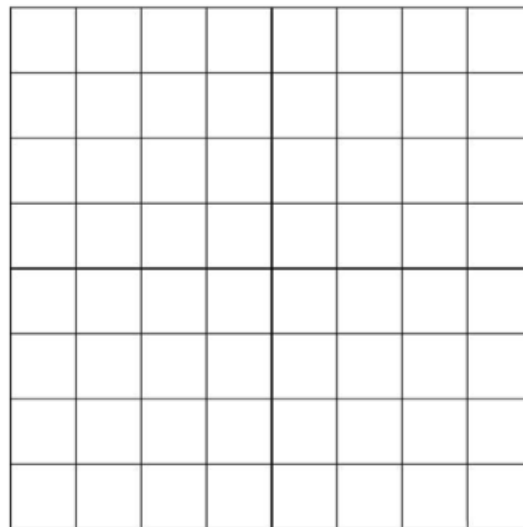


26) Graph the data given in the table below. Make sure the scale you choose is appropriate for the data and be sure to use a break in the graph if it is necessary.

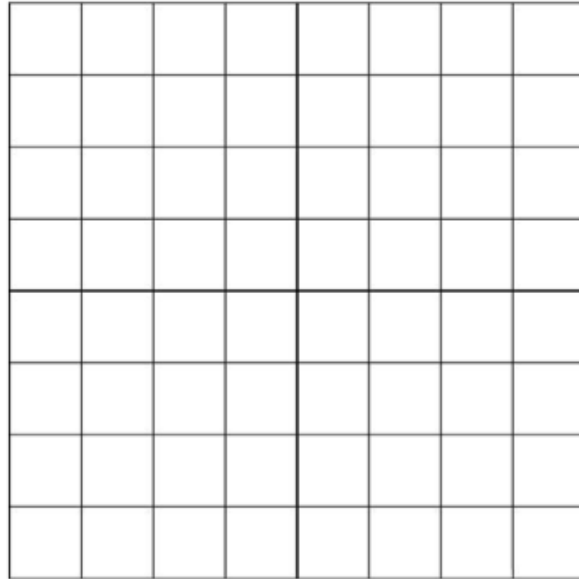
x	y
5	10
10	20
15	30
20	40
25	50



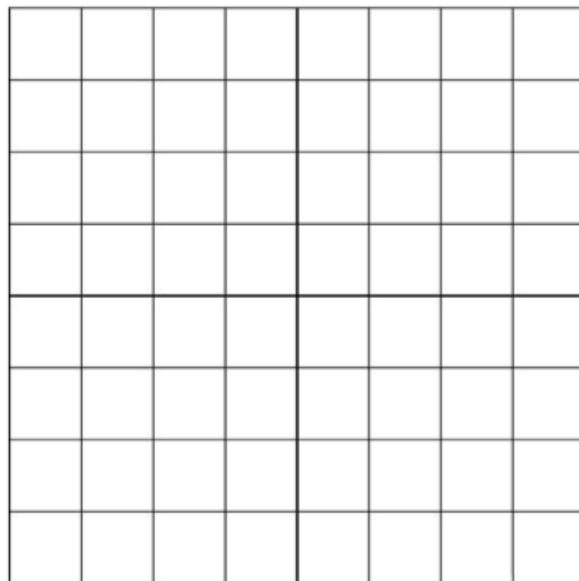
27) Stephanie's graduation picnic costs \$7 for every attendee. Write an equation that shows the relationship between the attendees, a , and the cost, c . Complete the table to represent this scenario. Then graph the function. Be sure to label your table and graph.



- 28) Yolanda reads 10 books each month as part of her book club. Write an equation that shows the relationship between the months, m , and the total books read, b . Complete the table to represent this scenario. Then graph the function. Be sure to label your table and graph.



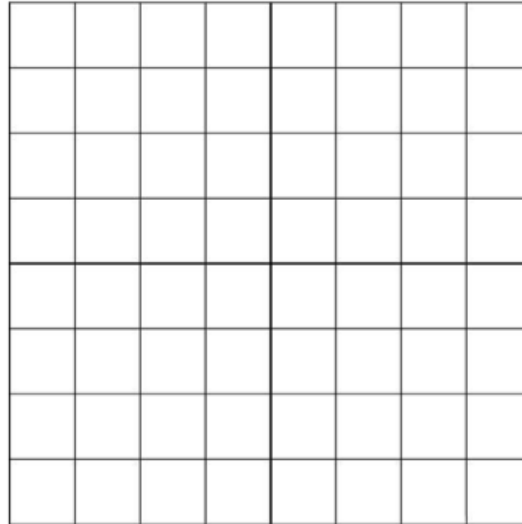
- 29) A membership to the art museum costs \$6.50. Write an equation that shows the relationship between the number of memberships purchased, m , and the total cost, c . Complete the table to represent this scenario. Then graph the function. Be sure to label your table and graph.



Day 2

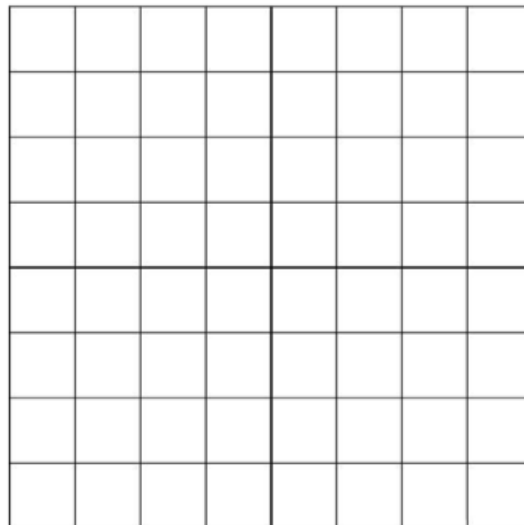
30) Graph the data given in the table below. Make sure the scale you choose is appropriate for the data and be sure to use a break in the graph if it is necessary.

<i>a</i>	<i>b</i>
1.25	3.75
2	6
2.75	8.25
3.5	10.5
4.25	12.75



31) Graph the data given in the table below. Make sure the scale you choose is appropriate for the data and be sure to use a break in the graph if it is necessary.

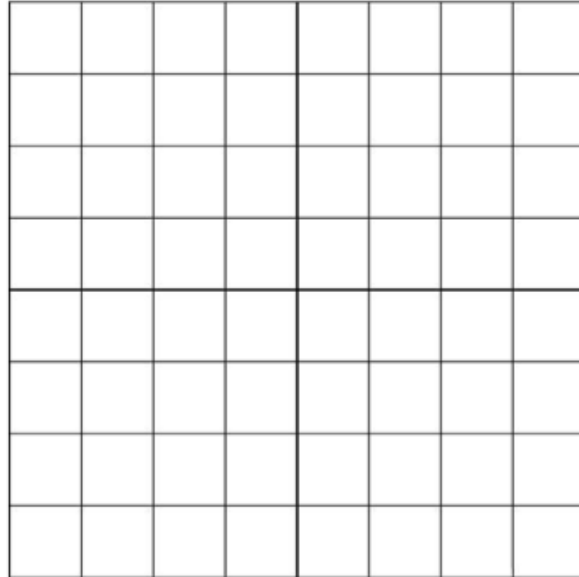
<i>c</i>	<i>d</i>
3	39
4	52
5	65
6	78
7	91



32. Harry rides his bike at an average rate of 15 miles per hour. Write an equation that shows the relationship between the distance, d , that Harry rides and the number of hours, h , that he rides. Complete the table to represent this scenario. Then graph the function. Be sure to label your table and graph.

33. The town parking meters charge \$0.50 for every hour of parking. Write an equation that shows the relationship between the cost of parking, c , and the number of hours paid for, h . Complete the table to represent this scenario. Then graph the function. Be sure to label your table and graph.

34. Each bag contains 20 lollipops. Write an equation that shows the relationship between the number of bags, b , and the number of lollipops, n . Complete the table to represent this scenario. Then graph the function. Be sure to label your table and graph.



6th Grade Dependent and Independent Variables Chapter Questions

1. Explain the relationship between dependent and independent variables.
2. Identify examples of dependent and independent variables in the real world.
3. How can equations, tables, and graphs be used to represent real-life scenarios?
4. Why do we use equations, tables, and graphs to represent real-life scenarios?