

ALGEBRAIC REPRESENTATIONS UNIT Study Guide

Solve each of the problems below. These represent the types of questions on your test. Be sure to ask questions if you need more help with a topic.

I CAN DIFFERENTIATE BETWEEN ADDITIVE & MULTIPLICATIVE RELATIONSHIPS.

6.4A

Label each of the following as an additive or a multiplicative relationship.

1. $y = 7x$
multiplicative

2. $y = x - 7$
additive

3. All of Mrs. Palmer's students stood on a 12-inch stool to take class pictures. The height of each student on the stool was represented by t , while their actual height was represented by h .
 $t = 12 + h$
additive

4.

# of HOURS (H)	1	2	3	4	5	6
TOTAL EARNINGS (t)	9	18	27	36	45	54

multiplicative
 $t = 9h$

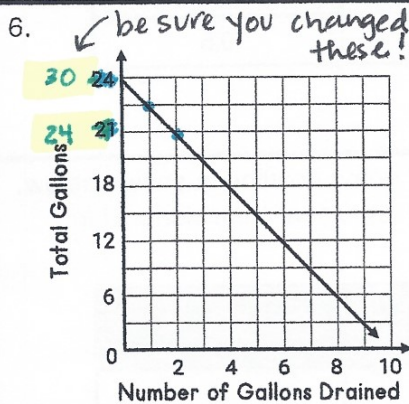
5.

# of CANS (C)	1	2	3	4	5	6
TOTAL # of CANS (t)	4	5	6	7	8	9

additive $C + 3 = t$

I CAN IDENTIFY INDEPENDENT & DEPENDENT QUANTITIES FROM TABLES & GRAPHS.

6.6A

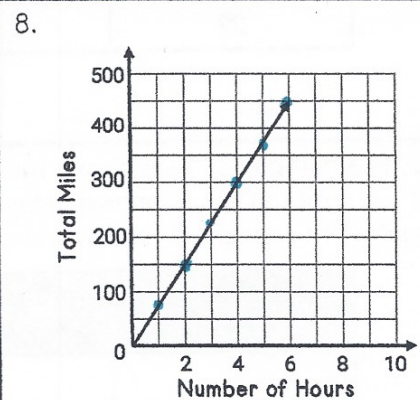


Independent quantities: x values
0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10
Dependent quantities: y values
30, 27, 24, 21, 18, 15, 12, 9, 6, 3, 0

7.

p	t
15	86.25
18	103.5
21	120.75
24	138
27	155.25

Independent quantities: p values
15, 18, 21, 24, 27
Dependent quantities: t values
86.25, 103.5, 120.75, 138, 155.25



Independent quantities: x values
0, 1, 2, 3, 4, 5, 6
Dependent quantities: y values
0, 75, 150, 225, 300, 375, 450

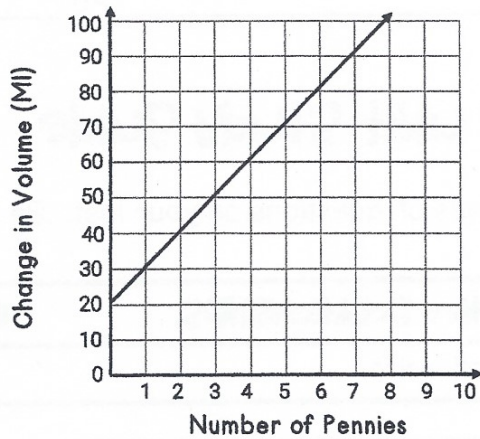
(0, 30)
(1, 27)
(2, 24)
(3, 21)
(4, 18)
(5, 15)
(6, 12)
(7, 9)
(8, 6)
(9, 3)
(10, 0)

(0, 0)
(1, 75)
(2, 150)
(3, 225)
(4, 300)
(5, 375)
(6, 450)

I CAN IDENTIFY INDEPENDENT & DEPENDENT QUANTITIES FROM TABLES & GRAPHS.

6.6A

9. Complete the statements below.



The change in volume depends on the number of pennies, which is the independent variable.

10. Complete the statements below.

Amount of Money Before Purchase (b)	Amount of Money After \$5.50 Purchase (a)
25	19.50
40	34.50
18	12.50
12	6.50
36	30.50

The \$ after 5.50 purchase depends on the \$ before purchase, which is the independent variable.

I CAN WRITE AN EQUATION TO REPRESENT A RELATIONSHIP FROM A TABLE.

6.6B

11. The amount of money Jameson earns is shown in the table below. Write an equation to represent the relationship.

Number of Hours (h)	Amount Earned (d)
4	50.00
9	112.50
13	162.50
10	125.00
22	275.00

$4 \overline{)50} \begin{array}{r} 12.5 \\ \underline{48} \\ 20 \\ \underline{20} \\ 0 \end{array}$ $10 \overline{)125} \begin{array}{r} 12.5 \\ \underline{100} \\ 25 \\ \underline{25} \\ 0 \end{array}$ $y = 12.5x$

12. The table below shows the number of inches a plant grows each day. Write an equation to represent the relationship.

Number of Days (d)	Height of Plant (h)
1	0.1
2	0.2
3	0.3
4	0.4
5	0.5

$y = 0.1x$

13. The number of feet above the ground that a hot air balloon flies is shown below. Write an equation to represent the relationship.

Number of Minutes (m)	Altitude in Feet (a)
0	0
1	250
2	500
3	750
4	1000

$y = 250x$

14. The total cost of going bowling is shown below. Write an equation to represent the relationship.

Cost of Lane Rental (r)	Total Cost of Bowling (c)
11	16
21	26
31	36
41	46
51	56

$y = x + 5$