

Complete all parts of each question.

1. Each table below shows a different input-output relationship.

- a) Find the rate of change in each table. Explain how you found this value.
- b) For each table, find the output value that corresponds to an input value of 0. What is this value called?
- c) Use your results from 1a and 1b to write an equation in $y = mx + b$ form.
- d) Use the words NOW and NEXT to write the rules that represent the data in the tables.

Input	Output
0	-6
1	-2.5
2	1
3	4.5
4	8

- a)
- b)
- c)
- d)

Input	Output
-1	-7
0	1
3	25
5	41
7	57

- a)
- b)
- c)
- d)

Input	Output
-5	-35
5	-21
10	-14
20	0
35	21

- a)
- b)
- c)
- d)

2. You can represent linear relationships with a graph, a table of values, or an equation. Here are two linear relationships. Give all the other ways to show each relationship.

a) For the line graphed below, complete the table of values and write the equation

	<p>Table of values:</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 50%;">x</th> <th style="width: 50%;">y</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>	x	y										
x	y												
<p>Equation:</p>													

b) For the table of values below, graph and write the equation of the line.

<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 50%;">x</th> <th style="width: 50%;">y</th> </tr> </thead> <tbody> <tr><td>-2</td><td>2</td></tr> <tr><td>-1.5</td><td>1.5</td></tr> <tr><td>0</td><td>0</td></tr> <tr><td>3</td><td>-3</td></tr> </tbody> </table>	x	y	-2	2	-1.5	1.5	0	0	3	-3	<p>Graph:</p>
x	y										
-2	2										
-1.5	1.5										
0	0										
3	-3										
<p>Equation:</p>											

Complete all parts of each question.

1. Each table below shows a different input-output relationship.

i.

Input	Output
0	-6
1	-2.5
2	1
3	4.5
4	8

ii.

Input	Output
-1	-7
0	1
3	25
5	41
7	57

iii.

Input	Output
-5	-35
5	-21
10	-14
20	0
35	21

Find the rate of change in each table. Explain how you found this value.

i. $m = 3.5$ ii. $m = 8$ iii. $m = 7/5$

b) For each table, find the output value that corresponds to an input value of 0. What is value called?

i. -6 ii. 1 iii. -28

d) Use the words NOW and NEXT to write the rules that represent the data in the tables.

i. $NEXT = NOW + 3.5$; starting at -6 ii. $NEXT = NOW + 8$; starting at -7 iii. $NEXT = NOW + 1.4$; starting at -35

c) Use your results from 1a and 1b to write an equation in $y = mx + b$ form.

i. $y = -6 + 3.5x$ ii. $y = 8x + 1$ iii. $y = -28 + (7/5)x$

2.

a. Your table might be different.

B. $y = -x$

$y = \frac{1}{2}x + 1$

0	1
2	2
4	3
6	4

