Algebra 1 Warm Up Section 1.8

1. Make a table for $y = 2x + 3$ with domain 0, 3, 6, and 9.

x				
y				

2. Write a rule for the function.

Input, x	0	2	4	9
Output, y	1	7	13	28

3. Jasmine sells bracelets. Her profit on each bracelet is $8. Write a rule that shows her total profit p as a function of the number of bracelets b she sells. Write the range of the function if the domain is 5, 10, 15, 20, and 25.

Homework: Pages 52-53; #3-8, #10-12, #16

GOAL
Represent functions as graphs

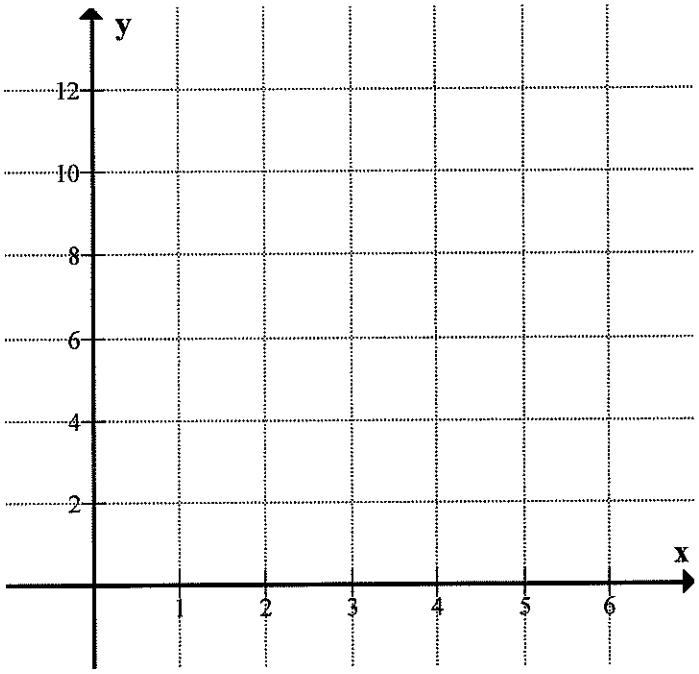
EXAMPLE 1
Graph a function

Graph the function $y = 3x$ with domain 0, 1, 2, 3, and 4

Solution
STEP 1 Make an input-output table.

x					
y					

STEP 2 Plot a point for each ordered pair (x, y).



Homework: Pages 52-53; #3-8, #10-12, #16

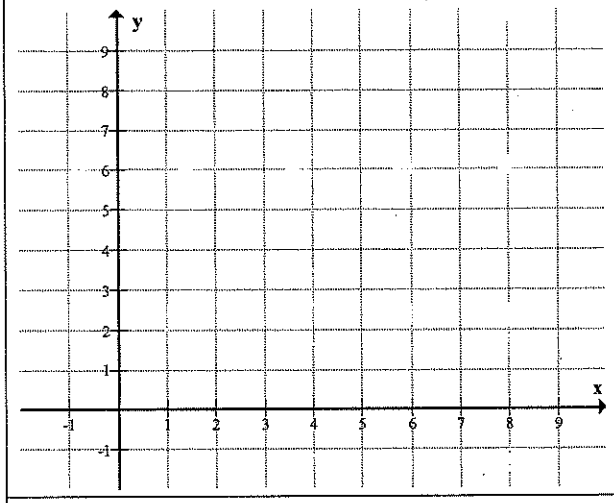
Exercises for Example 1

Graph the function.

1. $y = \frac{1}{2}x + 3$

Domain: 0, 2, 4, 6, and 8

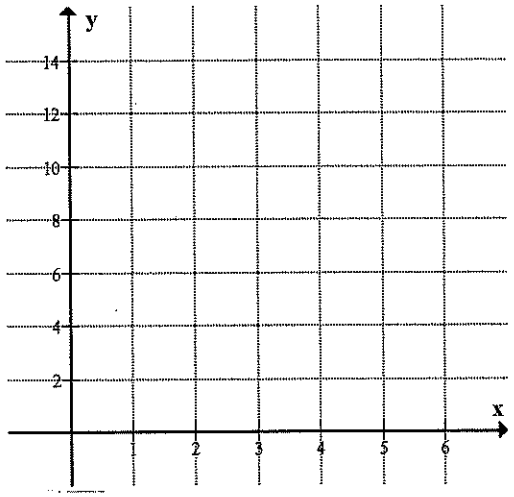
x					
y					



2. $y = 4x - 4$

Domain: 1, 2, 3, 4, and 5

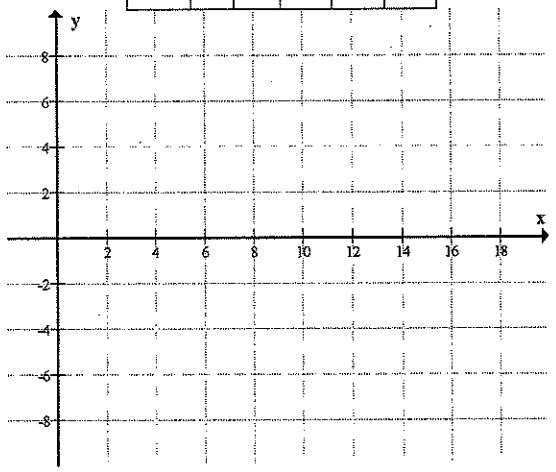
x					
y					



3. $y = -\frac{3}{4}x + 6$

Domain: 0, 4, 8, 12, and 16

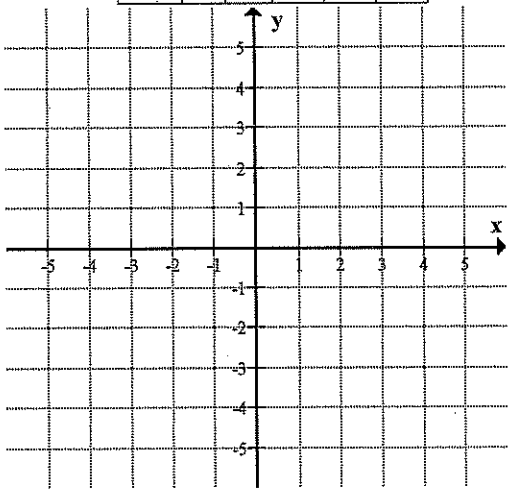
x					
y					



4. $y = -2x + 7$

Domain: 1, 2, 3, 4, and 5

x					
y					

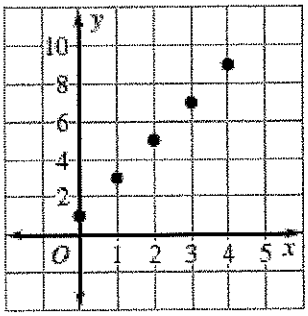


Homework: Pages 52-53; #3-8, #10-12, #16

EXAMPLE 2

Write a function rule for a graph

Write a rule for the function represented by the graph. Identify the domain and the range of the function



Solution

STEP 1 Make a table for the graph.

x					
y					

STEP 2 Find a relationship between the inputs and outputs. Notice from the table that each output value is 1 more than twice the corresponding input value

STEP 3 Write a function rule that describes the relationship:

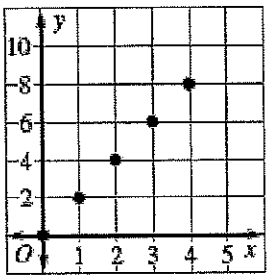
The domain of the function is:

The range is:

Exercises for Example 2

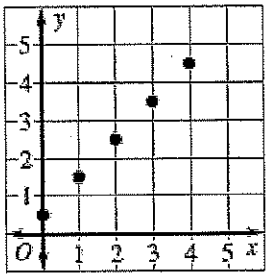
Write a rule for the function represented by the graph. Identify the domain and the range of the function.

5.



x					
y					

6.



x					
y					

1.8 Practice A

Algebra 1

Complete the statement.

1 The _____ axis of the graph of a function is labeled with the input variable.

2 The _____ axis of the graph of a function is labeled with the output variable.

Write the ordered pairs that can be formed from the table.

3

Input	Output
0	2
1	4
2	6
3	8

4

Input	Output
3	2
6	2
9	2
12	2

5

Input	Output
10	4
9	8
8	12
7	16

Homework: Pages 52-53; #3-8, #10-12, #16

1.8 Practice A

Algebra 1

Identify the ordered pairs in the graph. Then identify the domain and range.

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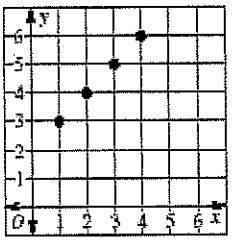

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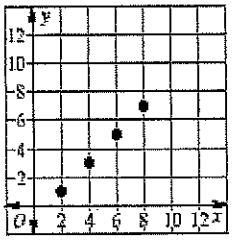

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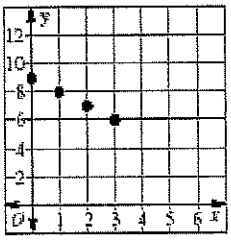

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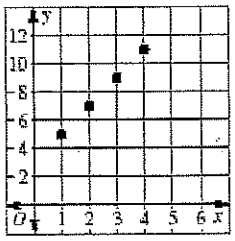

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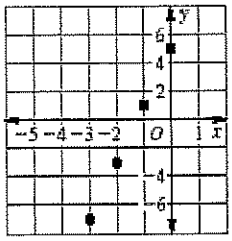

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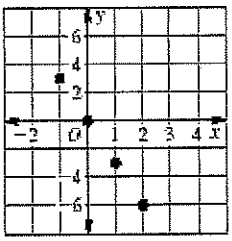


Home 3; #3-8, #10-12, #16

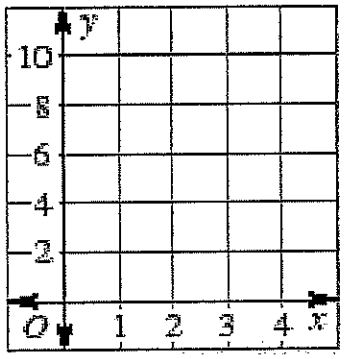
1.8 Practice A

Algebra 1

Graph the function.

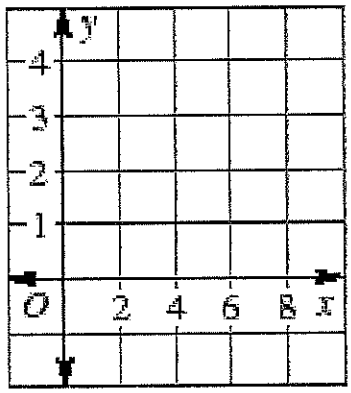
12. $y = x + 5$

Domain: 0, 1, 2, 3



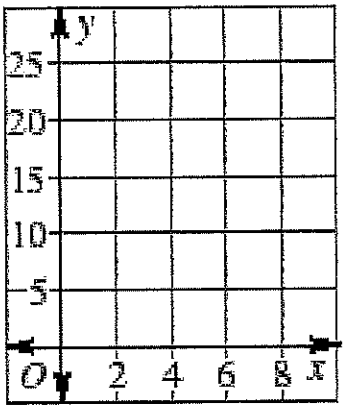
13. $y = x - 3$

Domain: 6, 5, 4, 3



14. $y = 3x$

Domain: 1, 3, 5, 7



Homework: Pages 52-53; #3-8, #10-12, #16

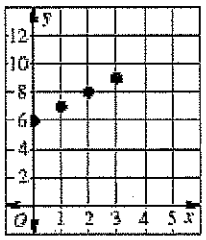
1.8 Practice A

Algebra 1

Match the rule for the function with its graph.

15. $y = 6x$	**16.** $y = 6x - 1$	**17.** $y = x + 6$
18. $y = \frac{1}{6}x$	**19.** $y = x - 6$	**20.** $y = 6x + 1$

A.



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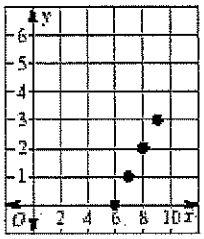

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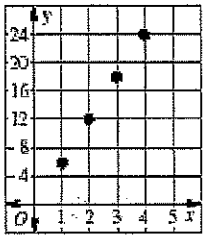

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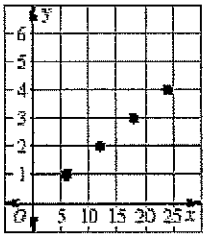

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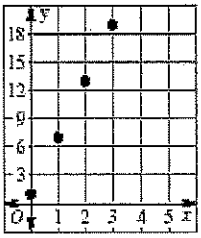

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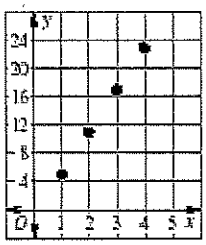
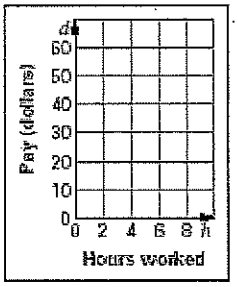


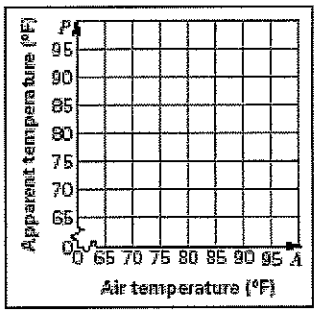
21. Hourly Pay The table shows the pay d (in dollars) as a function of the number of hours worked h. Graph the function.



Hours worked, h	1	2	3	5	8
Pay (dollars), d	6.75	13.50	20.25	33.75	54

Homework: Pages 52-53; #3-8, #10-12, #16

22. Heat Index The table shows the apparent temperature P (in degrees Fahrenheit), or the temperature as it feels to your body, as a function of the air temperature A (in degrees Fahrenheit) when there is 10% humidity. Graph the function. Then use your graph to predict the apparent temperature when the air temperature is 105°F and the humidity is 10%.



Air temperature (°F), A	70	75	80	85	90	95
Apparent temperature (°F), P	65	70	75	80	85	90

Homework: Pages 52-53; #3-8, #10-12, #16