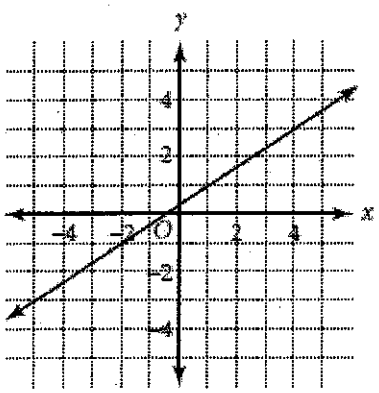
Unit 1 Linear Functions Name_____
Review of Domain, Range & Functions Hour_____ Date_____

In Exercises 1 – 8, a) Find the Domain b) Find the Range
c) State whether each relation represents a function

1.



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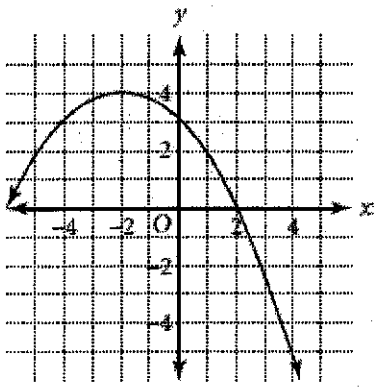
2.



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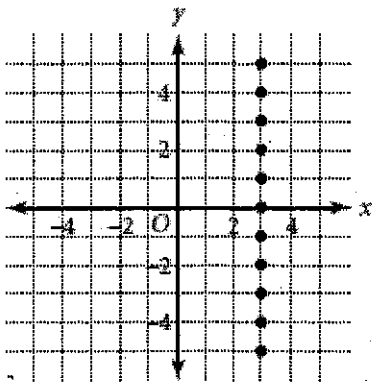
3.



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4.

x	−2	−1	0	1	2
y	8	4	0	4	8

_____

5.

x	1	2	3	4	5
y	2	3	2	3	2

_____

6.

x	2	3	2	3	2
y	1	2	3	4	5

_____

7. $\{(1, 5), (0.5, 8), (0, 3)\}$ _____

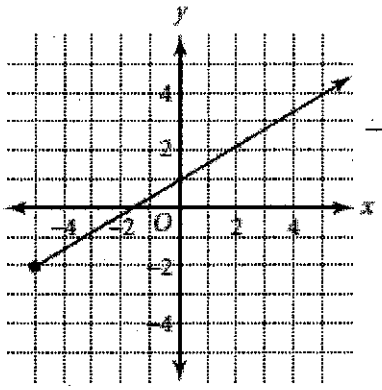
8. $\{(32, 4), (16, 7), (16, 4)\}$ _____

State the domain and range of each function.

9. $\left\{(-1, -3), (0, 1), \left(\frac{1}{2}, 3\right), \left(\frac{3}{2}, 7\right)\right\}$

_____

10.



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11. $\{(-4.5, 6), (3, -1.5), (6.5, -5), (12, -10.5)\}$

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12. $\{(-2, 12), (0, 8), (1, 9)(5, 33)\}$

_____

Evaluate each function for the given values of x.

13. $f(x) = 20x - 4$, for $x = -2$ and $x = 8$ _____

14. $f(x) = 5x^2$, for $x = -3$ and $x = 5$ _____

15. $f(x) = 12 - 3x$, for $x = 7$ and $x = -5$ _____

16. $f(x) = 3x^2 - 2$, for $x = 11$ and $x = -4$ _____

17. $f(x) = 3x - x^2$, for $x = 0.5$ and $x = 0$ _____

a) Is it a function? b) What's the domain? c) what's the range

10. {(3,4),(2,4),(-6,4)} 11. {(-1,2),(1,-2),(2,1),(-2,-1)} 12. {(-5,4),(-5,-8),(-5,10)}

10a. _____ 11a. _____ 12a. _____

10b. _____ 11b. _____ 12b. _____

10c. _____ 11c. _____ 12c. _____

Find the range of each function when the domain is { –1, 0.5, 3.7}. Show your work!!!

13. $f(x)=4x+1$ 14. $g(x)=-4x+8$ 15. $h(w)=w^2+|w|$

R: _____ R: _____ R: _____

Determine if each relation is a function. If it is a function, state the domain and the range.

16.

x	y
1	-3
6	-2
9	-1
1	3

YES NO

D: _____

R: _____

17.

x	y
0	2
3	1
3	-1
5	3

YES NO

D: _____

R: _____

18.

x	y
-4	-4
-1	-4
0	-4
3	-4

YES NO

D: _____

R: _____

19. Light travels about 186,000 miles per second. The rule $d=186{,}000t$ describes the relationship between the distance d in miles and time t in seconds.

a. How far does light travel in 20 seconds? _____

b. How far does light travel in 1 minute? _____

c. How long does it take light to travel 20,000,000 miles? _____