

# Homework: Pg 271 Q's 8-15, 18-25

Identify the domain and range of each relation. Use a mapping diagram to determine whether the relation is a function.

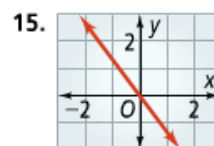
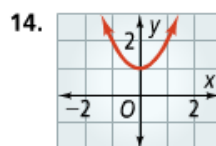
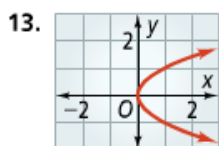
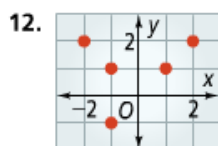
8.  $\{(3, 7), (3, 8), (3, -2), (3, 4), (3, 1)\}$

9.  $\{(6, -7), (5, -8), (1, 4), (7, 5)\}$

10.  $\{(0.04, 0.2), (0.2, 1), (1, 5), (5, 25)\}$

11.  $\{(4, 2), (1, 1), (0, 0), (1, -1), (4, -2)\}$

Use the vertical line test to determine whether the relation is a function.



Find the range of each function for the given domain.

18.  $f(x) = 2x - 7; \{-2, -1, 0, 1, 2\}$

19.  $g(x) = -4x + 1; \{-5, -1, 0, 2, 10\}$

20.  $h(x) = x^2; \{-1.2, 0, 0.2, 1.2, 4\}$

21.  $f(x) = 8x - 3; \left\{-\frac{1}{2}, \frac{1}{4}, \frac{3}{4}, \frac{1}{8}\right\}$

Find a reasonable domain and range for each function. Then graph the function.

22. **Fuel** A car can travel 32 mi for each gallon of gasoline. The function  $d(x) = 32x$  represents the distance  $d(x)$ , in miles, that the car can travel with  $x$  gallons of gasoline. The car's fuel tank holds 17 gal.

23. **Nutrition** There are 98 International Units (IUs) of vitamin D in 1 cup of milk. The function  $V(c) = 98c$  represents the amount  $V(c)$  of vitamin D, in IUs, you get from  $c$  cups of milk. You have a 16-cup jug of milk.

Determine whether the relation represented by each table is a function. If the relation is a function, state the domain and range.

24. 

x	0	3	3	5
y	2	1	-1	3

25. 

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