

Lesson 11.1-11.2
Quiz - Form A

Unit 11

Give the domain and range of each relation. Is the relation a function?

1. $M = \{(5, 2), (4, 3), (7, 1), (6, 3)\}$

2. $B = \{(1, 1), (5, 7), (9, 1), (5, 3), (2, 4)\}$

3. $K = \{(2, 3), (1, 5), (6, 6), (5, 3)\}$

Graph each relation. Is each a function? If so, what kind of function (linear, constant, or neither)?

4. $y = 3x + 1$

5. $y = \frac{3x}{2} - 2$

6. $x = 4$

7. $y - 4 = -2$

Lesson 11.1-11.2
Quiz - Form B

Unit 11

Give the domain and range of each relation. Is the relation a function?

1. $x = \{(4, 7), (3, 2), (5, 3), (4, 4)\}$
2. $B = \{(5, 3), (2, 1), (3, 3), (5, 7), (8, 8)\}$
3. $K = \{(9, 2), (2, 9), (8, 9), (4, 2), (0, 0)\}$

Graph each relation. Is each a function? If so, what kind of function (linear, constant, or neither)?

4. $y = 2x + 1$
5. $y = \frac{5}{2}x - 2$
6. $x = -2$
7. $2y + 3 = y - 1$

Lesson 11.3-11.4
Quiz - Form A

Unit 11

Find the range of each function for the given domain:

1. $f(x) = 2x - 3$; $D = \{2, 4, 6\}$
2. $f(x) = x^2 - 1$; $D = \{1, 3, 7, 9\}$

For $g(x) = x + 1$ $f(x) = 2x^2 - 2$, find:

3. $g(2) + f(-1)$
4. $f[g(3)]$

Write a proportion and solve each problem:

5. The number of books sold varies directly as the cost. If 7 books cost \$2.80, find the cost of 2 books.
6. The scale on a map is 3cm represents 150km. How many kilometers are represented by 7cm?

Lesson 11.3-11.4
Quiz - Form B

Unit 11

Find the range of each function for the given domain:

1. $f(x) = 5x - 4$; $D = \{0, 2, 4\}$
2. $f(x) = 2x^2 - x$; $D = \{3, 4, 5\}$

For $g(x) = x^2 - 2$ $f(x) = 2x - 3$, find:

3. $g(3) - f(-2)$
4. $g[f(3)]$

Write a proportion and solve each problem:

5. The number of newspapers sold varies directly as the cost. If 3 newspapers cost \$1.05, find the cost of 7 newspapers.
6. On a blueprint, the length of a closet that is 6m long is represented by 5cm. Find the dimensions of a room represented by a rectangle 7cm by 12cm.

Lesson 11.5-11.6
Quiz - Form A

Unit 11

1. The length of a rectangle with a constant area varies inversely as the width. When the length is 4, the width is 9. Find the length when the width is 6.
2. The volume of gas varies inversely as the pressure. If the volume is 210m^3 under 5 kg of pressure, then find the volume under 105 kg of pressure.
3. Mike is 3 times as old as Kim. In 6 years, he will be twice as old as she will be then. How old is each now?
4. Tim is twice as old as Kelly. In four years, he will be 8 years older than she will be then. How old is each now?

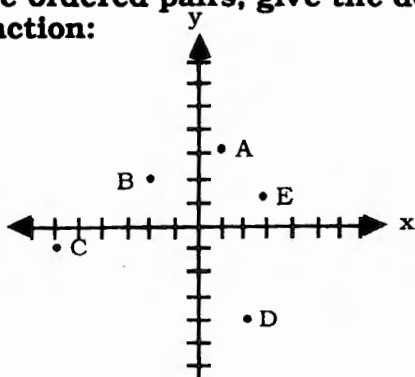
Lesson 11.5-11.6
Quiz - Form B

Unit 11

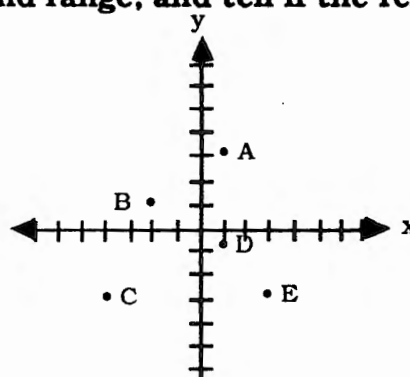
1. The length of a rectangle with a constant area varies inversely as the width. When the length is 6, the width is 3. Find the length when the width is 2.
2. The volume of gas varies inversely as the pressure. If the volume is 150m^3 under 3 kg of pressure, then find the volume under 5 kg of pressure.
3. Kim is 7 years older than Tricia. Eleven years ago, Kim was twice as old as Tricia was then. How old are they now?
4. Mike is 40 years younger than his uncle Bill. In 10 years, Bill will be 3 times as old as Mike will be then. How old is each now?

List the ordered pairs, give the domain and range, and tell if the relation is a function:

1.



2.



3. Give the domain and range of this relation. Then tell if it is a function:

$$\{(-2, -1) (3, 1) (-1, 5) (4, -2) (3, 4)\}$$

For what value of K will the relation not be a function?

4. $\{(4 - 2k, 8), (6k, -12)\}$

5. $\{(3k + 2, 2k), (k - 10, k)\}$

Graph each. Tell which are functions, which are linear functions, and which are constant functions:

6. $y = -3x$

7. $x = -2$

8. $y - 4 = 1$

9. $y - (2 + x) = 3$

10. $5y - (2 - 3y) = 14$

11. $2(3 - 2x) = 2y$

For the function F , find the indicated value:

12. $F = \{(-2, 5), (3, 8), (-3, 1), (9, -1)\}$ Find $f(-3)$.

13. $g(x) = -3x^2 - 2$; Find $g(-4)$.

For $f(x) = 3 - 2x$ and $g(x) = 2x^2$, find:

14. $g(3) + f(2)$

15. $g[f(3)]$

Find the range of each function for the given domain:

16. $h(x) = 2x - 5$; $D = \{-1, 0, 4\}$

17. $g(x) = |2x|$; $D = \{-4, 1, 3\}$

18. $k(x) = \frac{2x}{x - 3}$; $D = \{-1, 0, 4\}$

Tell if y varies directly or inversely as x , and give the constant of variation.
If neither, so state:

19.

y	x
-5	2
4	$-2\frac{1}{2}$
10	-1
-2	5

20.

x	y
4	20
-1	-5
2	10
5	15

21.

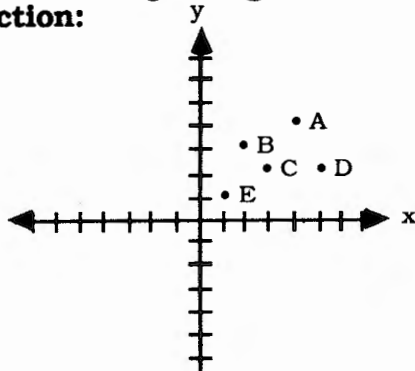
x	y
-3	18
2	-12
-4	24
$\frac{4}{3}$	-8

Write an equation and solve each problem:

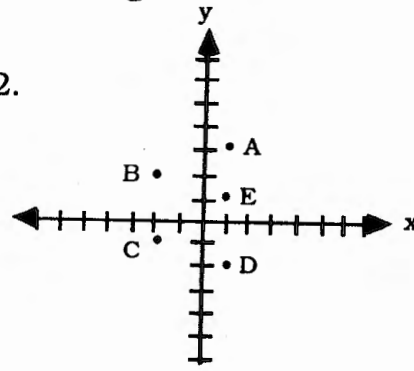
22. y varies inversely as x . If y is 5 when x is 4, find y when x is 10.
23. Skip is 16 years older than Chan. In 3 years, the sum of their ages will be 32. How old is each now?
24. The volume of a gas varies directly as its temperature. If the volume at 20°C is 1180cm^3 , what volume will 36°C yield?
25. If y varies directly as x , and y is 4 when x is 6, find y when x is 15.

List the ordered pairs, give the domain and range, and tell if the relation is a function:

1.



2.



3. Give the domain and range of this relation. Then tell if it is a function:

$$\{(-1, 1) (0, 0) (1, -1) (3, 4) (4, 1)\}$$

For what value(s) of k will the relation not be a function?

4. $\{(3k + 2, 3), (k + 1, 4)\}$

5. $\{(k + 3, 4), (2k + 1, 2)\}$

Graph each. Tell which are functions, which are linear functions, and which are constant functions:

6. $y = 2x$

7. $x = 3$

8. $y - 2 = 3$

9. $y - (3 - x) = 1$

10. $7y - (5 - y) = 19$

11. $3(x - 3) = 3y$

For each function, find the indicated value:

12. $g = \{(3, 0), (-5, -1)\}$; Find $g(-5)$.

13. $f(x) = x^2 + 4$; Find $f(-4)$.

For $f(x) = 3x - 2$ and $g(x) = x^2 + 1$, find:

14. $f(3) + g(-2)$

15. $f[g(2)]$

Find the range of each function for the given domain:

16. $f(x) = 5x - 6$; $D = \{0, 1, 3\}$

17. $f(x) = |x + 1|$; $D = \{-5, -4, 2\}$

18. $f(x) = \frac{4x - 3}{x + 6}$; $D = \{-7, 1, 4\}$

Tell if y varies directly or inversely as x , and give the constant of variation.
If neither, so state:

19.

x	y
1	5
2	10
-3	-15

20.

x	y
5	6
-3	-10
2	15

21.

x	y
-1	3
4	-12
-6	18

Write an equation and solve each problem:

22. y varies directly as x . If y is 6 when x is 4, find y when x is 2.
23. The cost of a certain metal varies directly as its mass. If 4kg cost \$16, find the cost of 7kg.
24. On a map, 100km are represented by 5cm. How many kilometers are represented by 11cm on the map?
25. If y varies inversely as x , and y is 17 when x is 3, find y when x is 155.