Identify the type of function, the Domain and the Range of each:

1) $y = \frac{3}{5}x - 10$

Type:

Domain:

Range:

2) $y = \frac{3}{5}x^2 - 10$

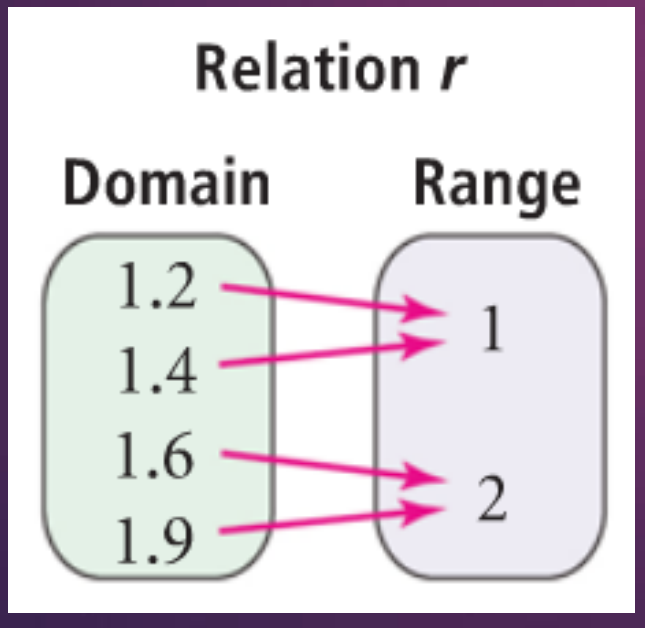
Type:

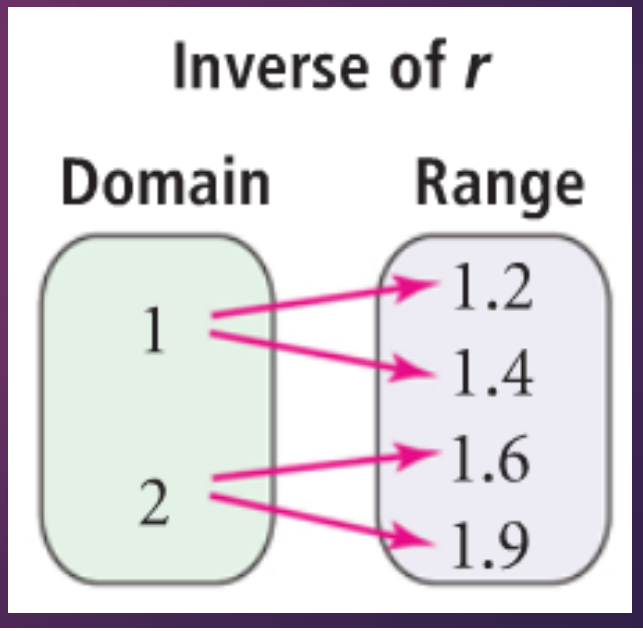
Domain:

Range:

Inverse Relations and Functions

If a relation pairs element a of its domain to element b of its range, the **inverse relation** pairs b with a. So, if (a, b) is an ordered pair of a relation, then (b, a) is an ordered pair of its inverse.





Finding the Inverse of a Relation

a. Find the inverse of relation s.

Relation s

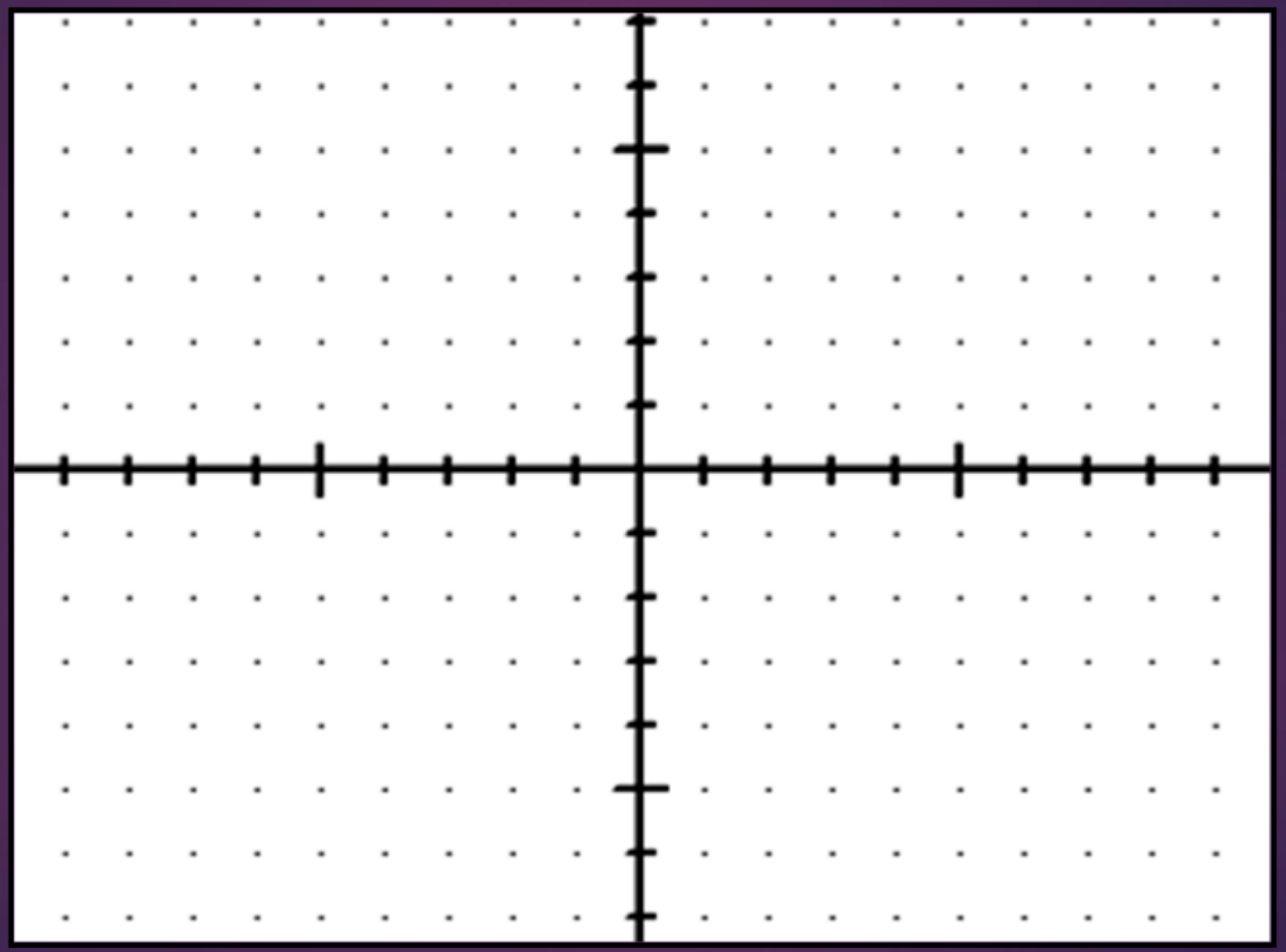
x	1	2	3	4
y	−1	0	1	1

Interchange the x and y values to get the inverse.

Inverse of Relation s

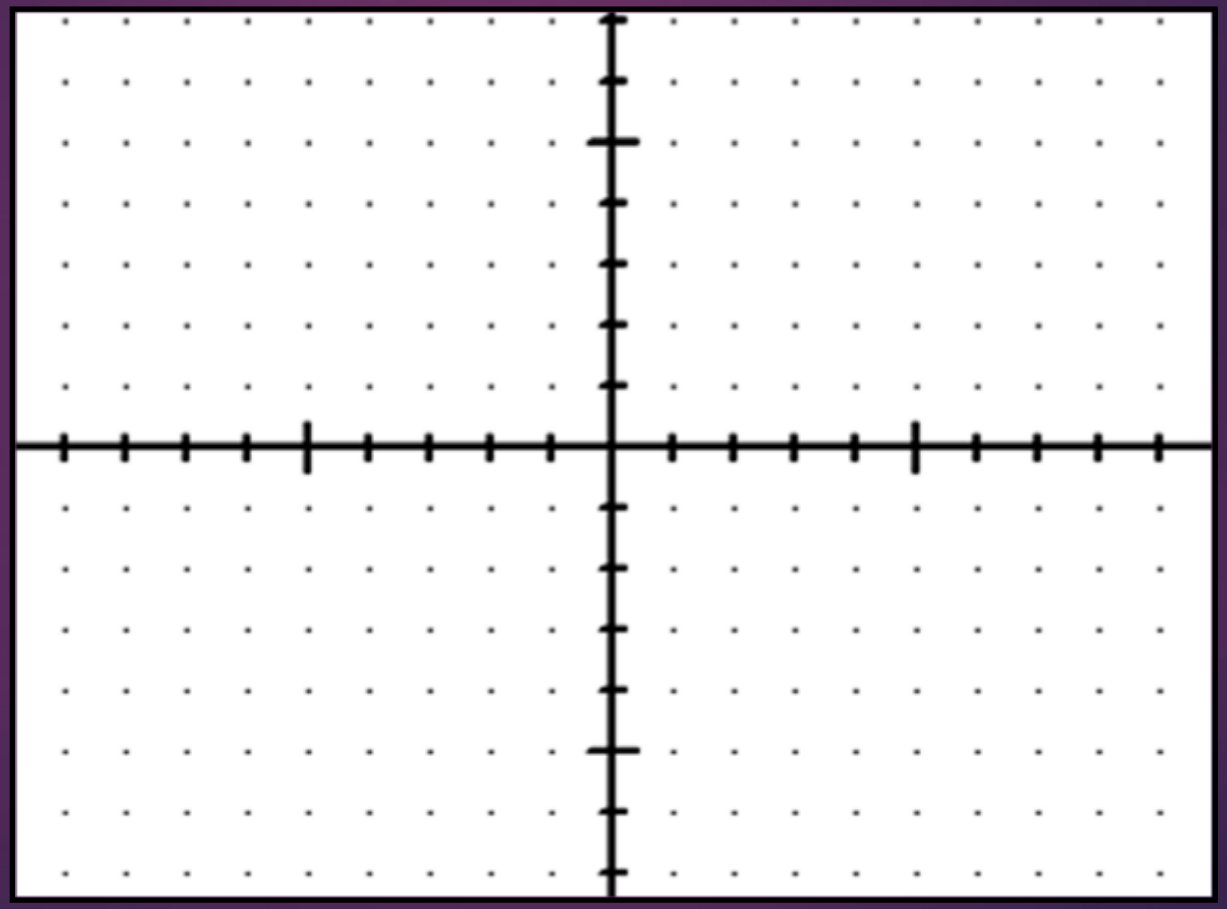
x	−1	0	1	1
y	1	2	3	4

b. Graph s and its inverse.

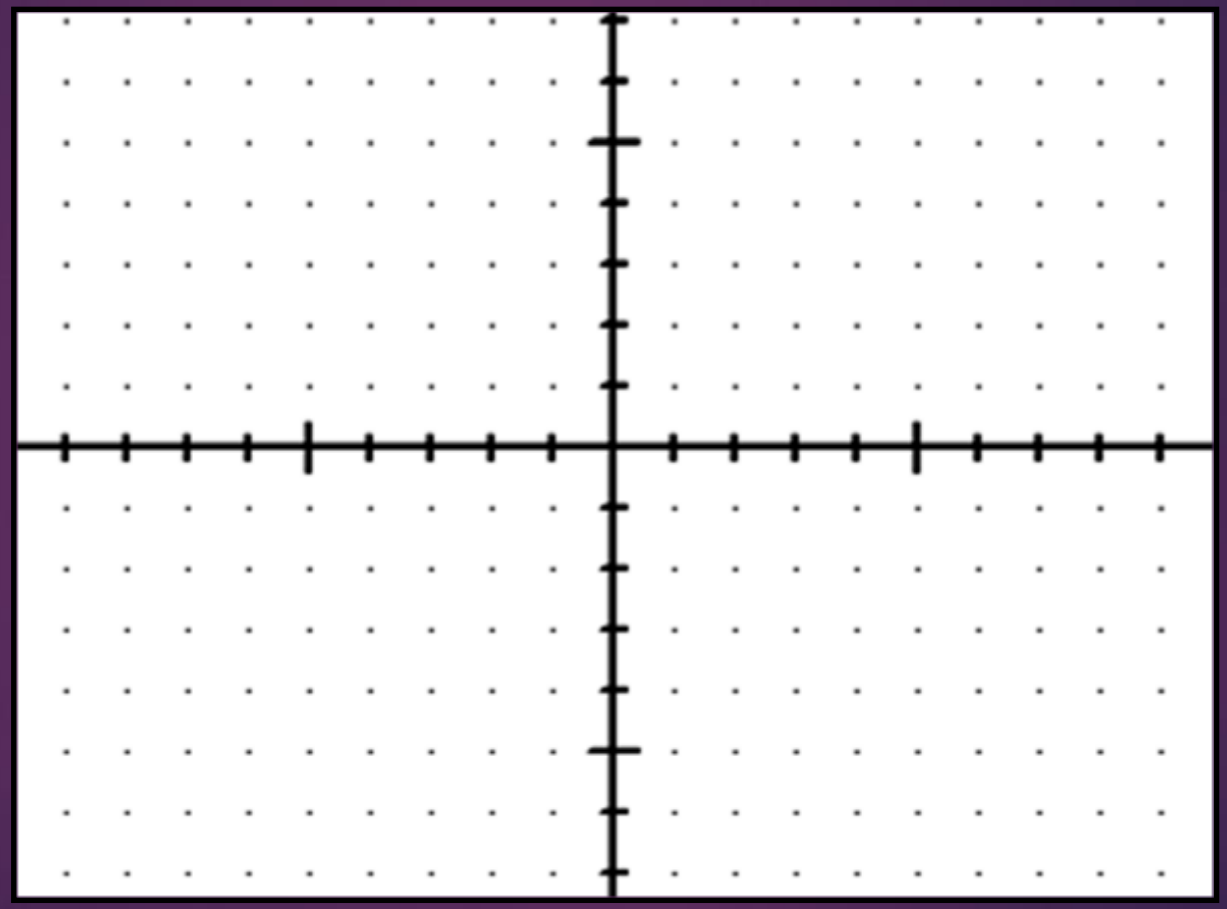


Graphing a Relation and Its Inverse

Graph $y = x^2 + 3$ and its inverse



Graph $y = 3x - 10$ and its inverse.



ASSIGNMENT:

Find the inverse of each relation. Graph the given relation and its inverse.

1.

x	1	2	3	4
y	0	1	0	2

2.

x	1	2	3	4
y	0	1	2	3

3.

x	0	1	2	3
y	0	1	4	9

4.

x	−3	−2	−1	0
y	2	2	2	2

Find the inverse of each function. Is the inverse a function?

5. $y = 3x + 1$

6. $y = 2x - 1$

7. $y = 4 - 3x$

8. $y = x^2 + 4$

9. $y = (x + 1)^2$

10. The formula for converting from Celsius to Fahrenheit temperatures is $C = \frac{9}{5}F + 32$.

a. Find the inverse of the formula. Is the inverse a function?

b. Use the inverse to find the Fahrenheit temperature that corresponds to 25°C.