Name _____ Date Answer Key Page 1

IS THE RELATION A FUNCTION?

A relation is a rule that takes input values and assigns them to output values. A relation is a **function** if every input value has exactly one output value.

Try it! Determine if each relation is a function. Circle the correct answer.

1.

x	*y*
–3	0
6	2
6	4
11	–1

Is the relation a function? Yes (No)

2.

x	*y*
–7	7
–2	2
4	4
7	7

Is the relation a function? (Yes) No

3.

x	*y*
3	–2
–1	–2
2	–3
3	–5

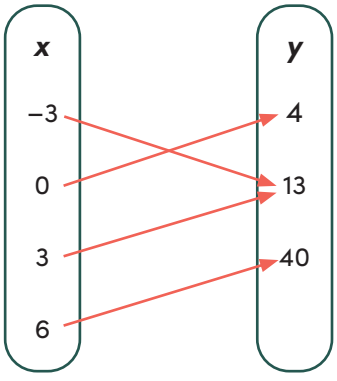
Is the relation a function? Yes (No)

4.

x	*y*
10	7
–10	7
20	–3
–10	–3

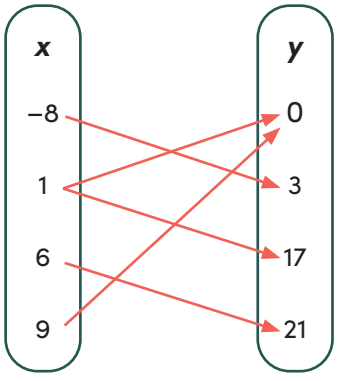
Is the relation a function? Yes (No)

5.



Is the relation a function? (Yes) No

6.



Is the relation a function? Yes (No)

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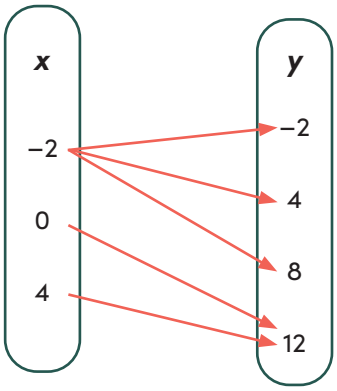
IS THE RELATION A FUNCTION?

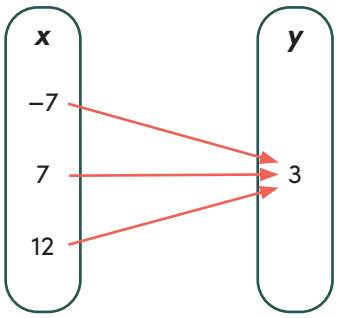
Keep going! Determine if each relation is a function. Circle the correct answer.

7.



Is the relation a function? **Yes** **No**

8.



Is the relation a function? **Yes** **No**

9. (-2, 3), (5, -1), (-2, 6), (3, -8)

Is the relation a function? **Yes** **No**

10. (3, 14), (-7, -2), (0, 14), (5, 6)

Is the relation a function? **Yes** **No**

11. (0, 0), (1, 1), (2, 2), (-1, -1)

Is the relation a function? **Yes** **No**

12. (8, -1), (10, 4), (8, 1), (10, -4)

Is the relation a function? **Yes** **No**

Challenge yourself! In each problem below, you are given a relation. Follow the directions to add or remove values to make each relation a function or not a function. Sample answers

13. Fill in the last row of the table with values that would make the relation **not** a function.

x	*y*
−3	−5
1	−1
6	3
−3	0

14. Cross out a row in the table that when removed would make the relation a function.

x	*y*
−8	1
4	−3
3	−3
~~4~~	~~−8~~

15. Add a new ordered pair that would make the relation **not** a function.

(6, 12), (3, -8), (2, -4), (__2__, __5__)

16. Cross out an ordered pair that when removed would make the relation a function.

(5, 0), (3, -1), (-11, 0), ~~(3, 14)~~

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