

Classwork Relations and Functions

Please work all problems on a separate sheet of paper.

In exercises 1 – 4 determine if the given relation is a function.

1. $J = \{(1,2), (1,3), (4,11), (6,7)\}$

2. $L = \{(1,2), (3,2), (7,11), (8,4)\}$

3. $M = \{(4,7), (5,7), (6,1), (8,3)\}$

4. $J = \{(9,8), (8,9), (0,4), (4,0)\}$

In exercises 5 – 9, use the given functions to find the following values; $f(-3)$, $f(0)$, $f(2)$,

$f(x-1)$, and $\frac{f(x+h)-f(x)}{h}$

5. $f(x) = 3x + 4$

6. $f(x) = -2x^2 + 5$

7. $f(x) = x^2 + 4x - 7$

8. $f(x) = x^2 + 7x - 2$

9. $f(x) = -2x^2 - x + 1$