

## Homework 22.2

**Simplify each expression.**

1)  $(-4x + 3x^3 - 5x^4) + (8x + 3x^2 - x^3)$

2)  $(-6 + 8x^2 + 5x^3) + (-3x^2 + 3x^4 + 4x^3)$

3)  $(-4 + 7n - 2n^4) - (-6 + 5n - 7n^4)$

4)  $(-4 - 5n^3 + 4n) + (-8n + 5n^3 - 6)$

5)  $(1 - 8a^2 - 8a) - (4 - 6a^2 - 4a)$

6)  $(p^4 - 4p^3 - 2p^2) - (-8p^3 - 5p^2 + 3p^4)$

What is the domain and range of the relation shown in the table provided? Determine if the relation is a function.

7.

x	y
2	-2
-2	-2
4	4
7	8

Domain:

Range:

8.

X	y
1	-3
2	-2
6	-1
9	-2

Domain:

Range:

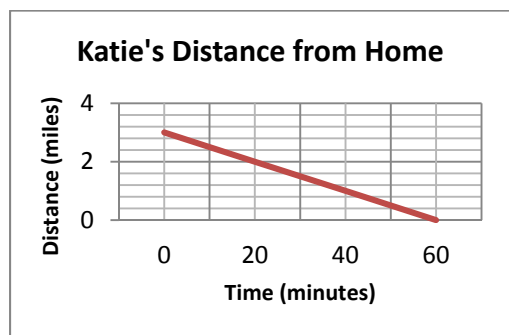
Determine which set of ordered pairs represent a function.

9.  $\{(9, 6), (5, 9), (4, 5), (3, 1)\}$

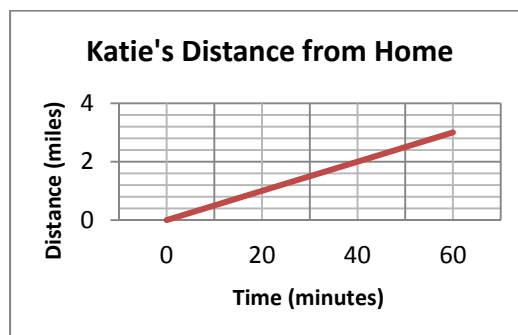
10.  $\{(8, 3), (7, 2), (3, 7), (8, 2)\}$

11. Katie rode her bike from her home to the park at a constant speed. She immediately turned around and rode back home, but at a faster constant speed. Katie ran along a straight path to and from the park. Which graph best represents Katie's distance from her home over time?

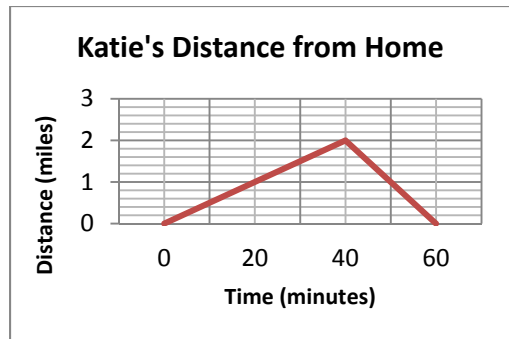
A.



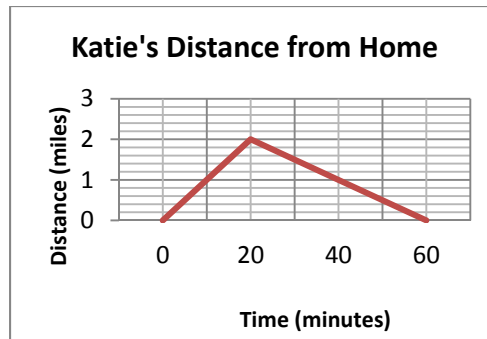
B.



C.



D.



## Answers to Homework 22.2

1)  $-5x^4 + 2x^3 + 3x^2 + 4x$

2)  $3x^4 + 9x^3 + 5x^2 - 6$

3)  $5n^4 + 2n + 2$

4)  $-4n - 10$

5)  $-2a^2 - 4a - 3$

6)  $-2p^4 + 4p^3 + 3p^2$

7. Domain:  $\{-2, 2, 4, 7\}$

8. Domain:  $\{1, 2, 6, 9\}$

9. Function

10. Not a Function

Range:  $\{-2, 4, 8\}$

Range:  $\{-3, -2, -1\}$

11. C.

Function

Function

