

Homework 22.1

Simplify each expression.

1) $(-3p + 1 - 7p^4) + (-3p^4 - 6 + 3p)$

2) $(-5x^4 + 2x^3 + 8x) + (4x - 7x^4 - 7x^3)$

3) $(-6r^3 - 4r^2 - 2) - (-6r^2 - 3r^4 - 7r^3)$

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

5) $(3k + 6 + 3k^3) - (-4k - 5k^3 - 6)$

6) $(6m^3 - m + 6m^4) - (2m^3 - m - 6m^4)$

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

7.

x	y
1	-3
-1	-2
3	3
6	6

Domain:

Range:

8.

x	y
0	-9
2	-1
2	-1
8	-9

Domain:

Range:

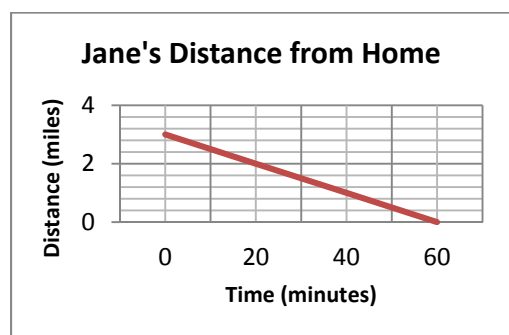
Determine which set of ordered pairs represent a function.

9. $\{(3, 5), (4, 9), (3, 6), (6, 2)\}$

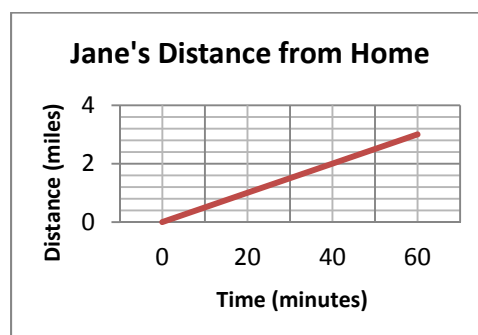
10. $\{(4, 6), (3, 4), (5, 1), (10, 2)\}$

11. Jane ran from her home to the corner store at a constant speed. She immediately turned around and ran back home, but at a slower constant speed. Jane ran along a straight path to and from the store. Which graph best represents Jane's distance from her home over time?

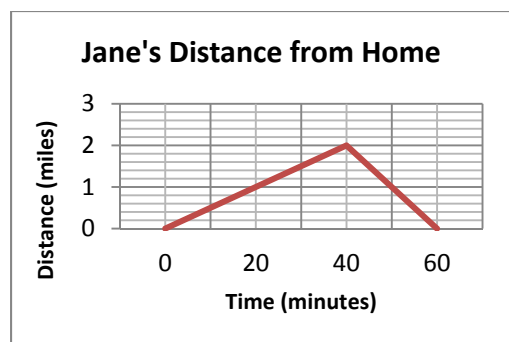
A.



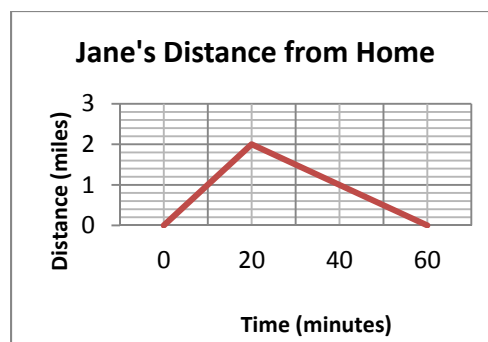
B.



C.



D.



Answers to Homework 22.1

1) $-10p^4 - 5$

5) $8k^3 + 7k + 12$

7. Domain: $\{-1, 1, 3, 6\}$

Range: $\{-3, -2, 3, 6\}$

Function

2) $-12x^4 - 5x^3 + 12x$

6) $12m^4 + 4m^3$

8. Domain: $\{0, 2, 8\}$

Range: $\{-9, -1\}$

Not a Function

3) $3r^4 + r^3 + 2r^2 - 2$

9. Not a Function

11. D.

4) $9x^4 + 10x^3 - 4x^2 + 6$

10. Function

