

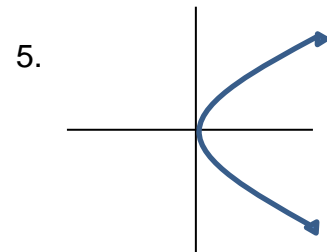
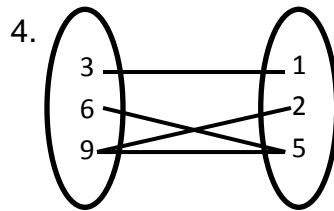
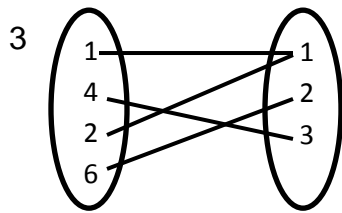
Functions F134 – More Practice on the First Stuff

For 1 – 8: a) find the domain and range of the relation.

b) Determine if the relation is a function (yes or no).

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

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



For 6 – 8, $f(x) = 2|3 - x|$, $g(x) = x^2 - 3x + 6$ and $h(x) = x(x - 3)$

find: 6. $f(5)$

7. $g(2)$

8. $h(-1)$

State the name of the basic function, **then** explain how the graph of the second functions is transformed from the basic function.

9. $f(x) = |x|$, $f^*(x) = |x - 3| + 5$

10. $f(x) = \sqrt{x}$, $f^*(x) = -\sqrt{0.6x}$

11. $f(x) = x^3$, $f^*(x) = 3(x + 1)^3 - 2$

12. $f(x) = |x|$, $f^*(x) = |2x - 4| - 3$

State the degree of the following polynomials:

13. $9x^6 + 100x^2 + 2x$

14. $4x^2y^2z^7 + 11x^3y^3z^3 + 2x^{10}yz$

Simplify

15. $(y^2 - 3x^2 + 8x + 4y) + (4y^2 + 8x^2 - 11x + 3y)$

16. $(x^2 - 7x + 10) - (x^2 + 3x - 2)$

17. $(x - 3)(x - 8)$

18. $(x^2 - 7x + 10)(x^2 + 3x - 2)$