

s I

Graphs, Domain and Range

Name _____

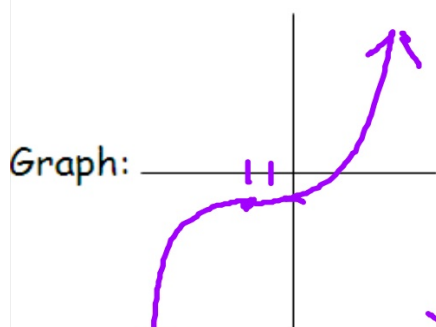
Block _____ Date _____

the missing information for the following functions.

$$f(x) = -1 + (x + 2)^3$$

Transformations:

D1
L2

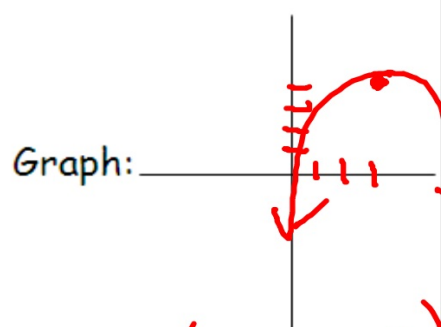


Domain: $(-\infty, \infty)$

Range: $(-\infty, \infty)$

$$2) f(x) = -(x - 3)^2 + 4$$

Transformations:



Domain: $(-\infty, \infty)$

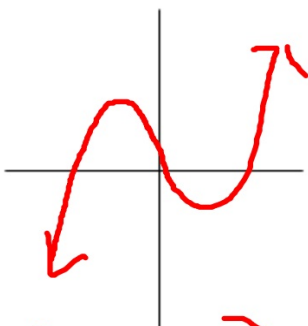
Range: $(-\infty, 4]$

Graphing calculator may be used to sketch a graph of 3 and 4.

$$f(x) = 2x^3 - 6x$$

$$4) g(x) = x^2 - 6x + 8$$

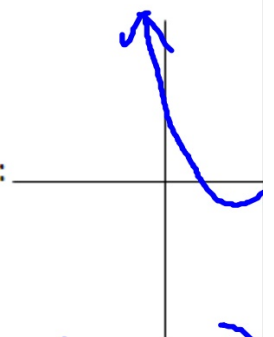
Graph:



Domain: $(-\infty, \infty)$

Range: $(-\infty, \infty)$

Graph:



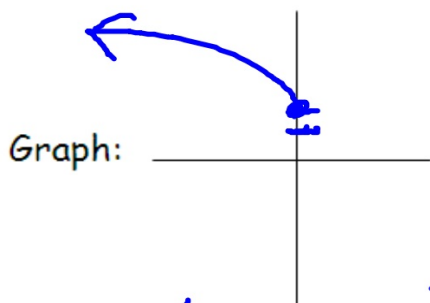
Domain: $(-\infty, \infty)$

Range: $[-1, \infty)$

$$f(x) = 2 + \sqrt{-x}$$

Transformations:

U2
FA(y-axis)



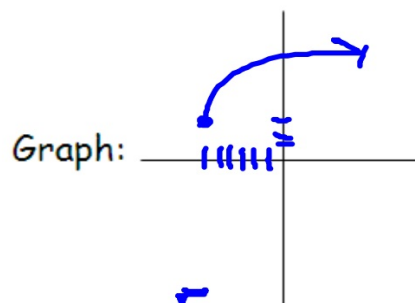
Domain: $(-\infty, 0]$

Range: $[2, \infty)$

$$6) j(x) = \sqrt{x+6} + 3$$

Transformations:

L6
U3



Domain: $[-6, \infty)$

Range: $[3, \infty)$

$$g(x) = \frac{1}{x+2}$$

Transformations:

L2

Graph:

Domain:

Range:

$(-\infty, -2) \cup (-2, \infty)$
 $(-\infty, 0) \cup (0, \infty)$

$$8) f(x) = \frac{1}{x} + 4$$

Transformations:

U2

Graph:

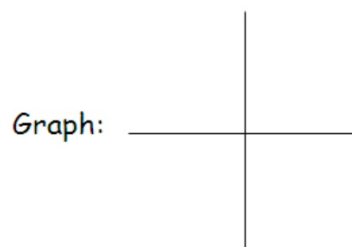
Domain:

Range:

$(-\infty, 0) \cup (0, \infty)$
 $(-\infty, 4) \cup (4, \infty)$

A graphing calculator may be used to sketch the graph of 9-12.

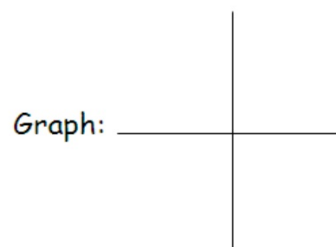
9) $f(x) = \frac{8}{x-4}$



Domain:

Range:

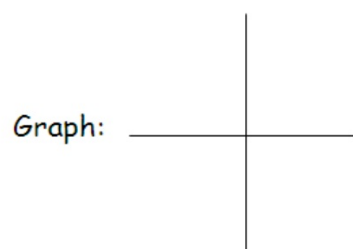
10) $k(x) = \frac{6x}{x^2-9}$



Domain:

Range:

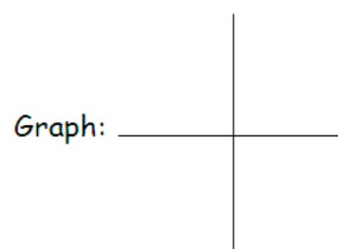
11) $g(x) = 5\sin\sqrt{x}$



Domain:

Range:

12) $f(x) = 3x^5 - 2x^2 + 1$



Domain:

Range:

Calculus I

Homework: Parent Graphs, Domain and Range

Name _____

Block _____ Date _____

Sketch a graph and determine the domain and range of each function.

A graphing calculator may be used for any problem.

13. $f(x) = 3 + \sqrt{x}$

14. $f(x) = 3\sin x$

15. $f(x) = x^5 - 3x^3 + x + 2$

16. $g(x) = 3x + 2$

$$17. h(x) = x^2 + 3$$

$$18. f(x) = \frac{x}{|x|}$$

$$19. f(x) = \frac{x+4}{(x+4)(x-3)}$$

$$20. f(x) = \sqrt{x^2 - 4}$$

21. $g(x) = \sqrt{5 - x^2}$

22. $h(x) = \sqrt{\frac{x-1}{x+2}}$