

Name: _____

Domain and Range

Exercise 1: Find the domain and the range of

1) $\{(1,2);(2,2);(4,2);(7,2)\}$

2) $\{(0,1);(1,2);(5,3);(2,1);(7,4)\}$

3) $\{(2,2);(3,3);(4,5);(5,4);(1,3)\}$

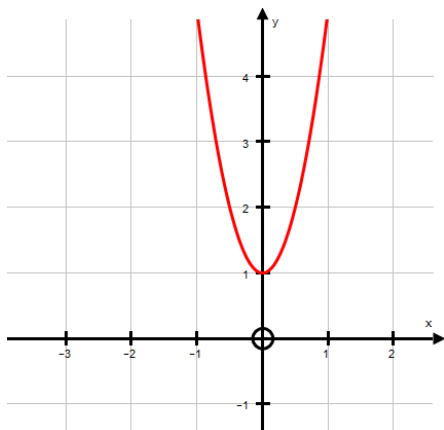
4) $\{(-1,2);(-3,0);(1,2);(2,5);(0,0)\}$

5) $\{(\sqrt{2},\sqrt{3});(\sqrt{3},\sqrt{2});(0,\sqrt{2});(-\sqrt{2},\sqrt{3})\}$

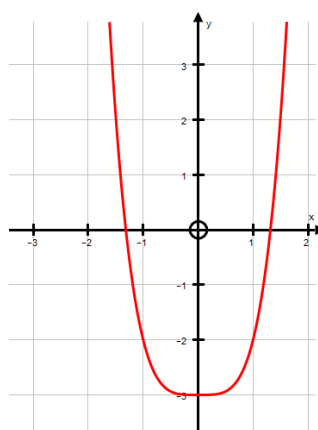
6) $\{(-\sqrt{2},\sqrt{3});(-\sqrt{6},\sqrt{5});(-\sqrt{3},\sqrt{5})\}$

Exercise 2: Find the domain and the range of each function graphically

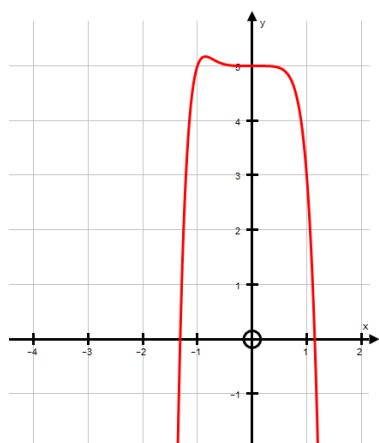
1)



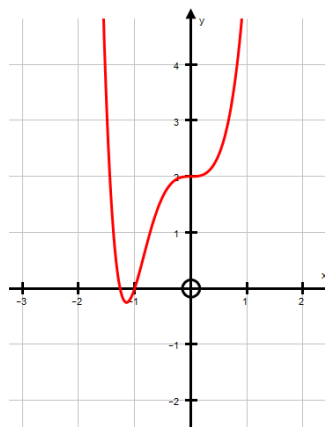
2)



3)



4)



Exercise 3: Algebraically determine the following domains. Use correct set notation.

1) $u(x) = x - 5$

2) $u(x) = 11x + 6$

3) $g(k) = 2k^2 + 4k - 6$

4) $d(m) = m + 3$

5) $m(t) = \sqrt{9 - 3t}$

6) $b(n) = \sqrt{2n - 8}$

7) $f(x) = \sqrt{2x + 3}$

8) $f(x) = \sqrt{4x + 7}$

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

10) $f(x) = \sqrt{-2x - 12}$

11) $u(x) = \frac{x - 5}{2x + 4}$

12) $y(c) = \frac{2}{c^2 + 3c}$

13) $a(r) = r + \frac{1}{r - 1}$

14) $q(w) = \frac{w + 4}{w^2 + 1}$

Exercise 4: We are told that the height h , in meters, of a certain projectile as a function of time t , in seconds, is $h = 20t - 4.9t^2$. Find the domain for the function $h(t)$.

Exercise 5: Find the domain for the function defined as $f(x) = x^2 + 4$