

Calculus 30

1. Graph each of the following equations and determine the domain and range of each:

a) $3x - 4y = 2$

b) $y = -2x^2 + 5$

c) $x = 2y^2 - 4$

d) $y = \sqrt{36 - 4x^2}$

e) $y = \sqrt{25 - x^2}$

f) $y = \sqrt{x^2 + 36}$

g) $y = \sqrt{x^2 - 25}$

h) $x^2 + y^2 = 16$

i) $4x^2 - 9y^2 = 36$

j) $y = \frac{1}{x+1}$

k) $y = \frac{2}{(x+1)(x-1)}$

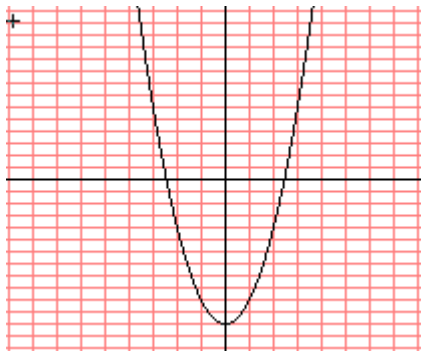
l) $y = \frac{3}{x^2 - 5x + 6}$

m) $y = \frac{x}{x+5}$

n) $y = \frac{x}{(x+3)(x-2)}$

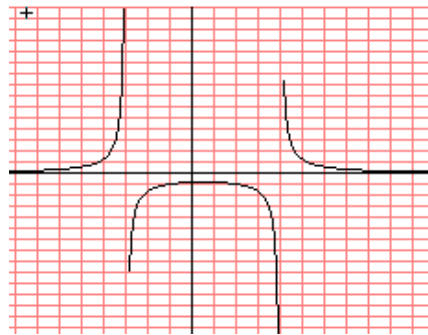
2. From the given graph determine the domain and range:

a)

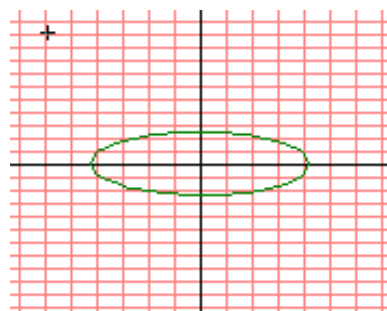
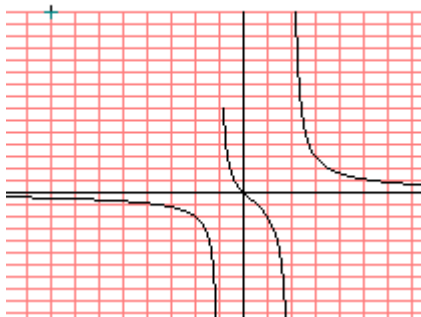


a)

c)



d)



3. Determine the possible equation given the domain and range:

a) domain $(-\infty, \infty)$, range $(-\infty, \infty)$

b) domain $(-\infty, \infty)$, range $(-\infty, 4)$

c) domain $[-4, 4]$, range $[-4, 4]$

d) domain $(-\infty, -3) \cup (3, \infty)$, range $(0, \infty)$

e) domain $(-\infty, -2) \cup (-2, 3) \cup (3, \infty)$, range $(-\infty, \infty)$