

Name:

Equation of a Circle - Skills

1) Find the centre and radius of each of the following circle equations

a) $x^2 + y^2 = 36$

b) $(x+2)^2 + (y+5)^2 = 64$

c) $(x-4)^2 + (y+7)^2 = 25$

d) $(x-2)^2 + (y-5)^2 = 49$

e) $(x+3)^2 + y^2 = 16$

f) $x^2 + y^2 + 10x + 8y - 40 = 0$

2) Find the equation of each circle below in the form $(x - h)^2 + (y - k)^2 = r^2$

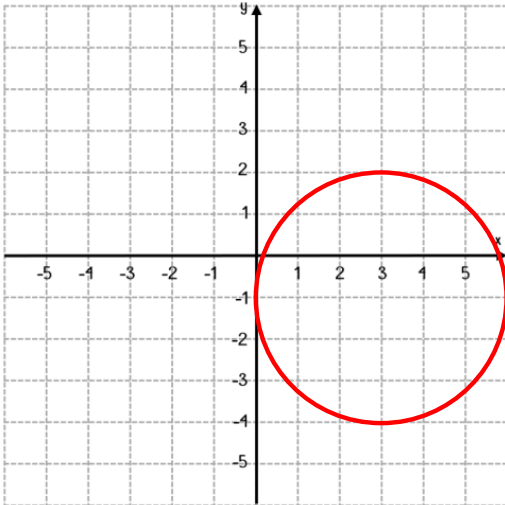
a) Centre = (8, 7) Radius = 3

b) Centre = (-6, 2) Radius = 10

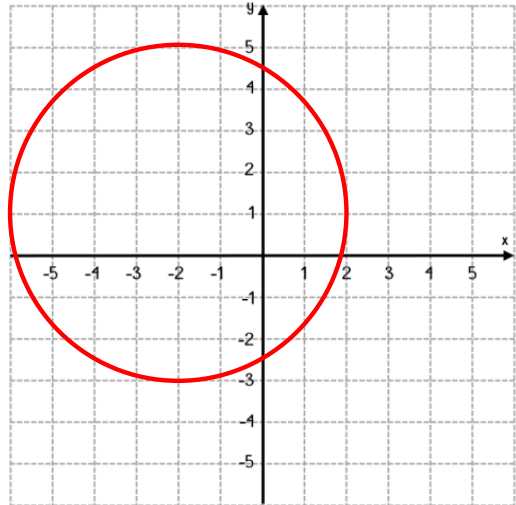
c) Centre = (-3, -5) Radius = 12

d) Centre = (-0.5, 3) Radius = $\sqrt{3}$

e)



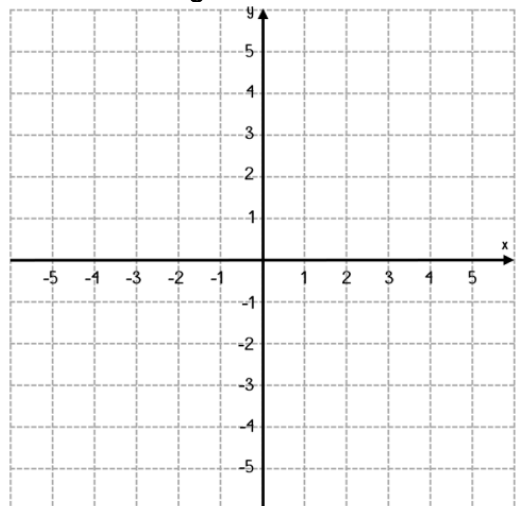
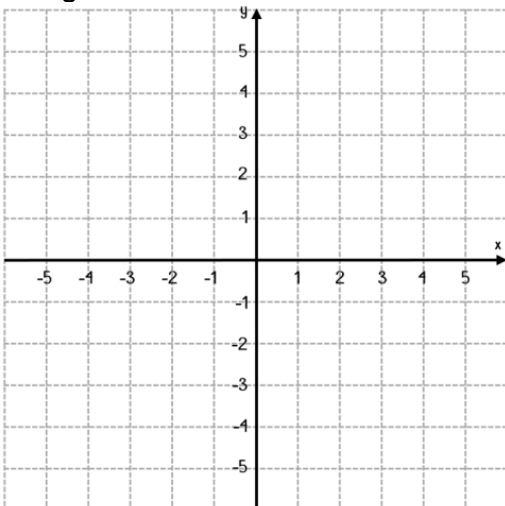
f)



3) Draw the following equations on the on the cartesian grids below

a) $x^2 + y^2 = 25$

b) $(x - 1)^2 + (y + 2)^2 = 4$



Find the asymptotes and the x & y intercepts to match each equation to its graph.

$$\frac{x^2 - x - 6}{x^2 + 7x + 10}$$

$$\frac{x^2 - x - 6}{-x^2 - 7x - 10}$$

$$\frac{x^2 + 6x - 7}{2x^2 + 8x - 42}$$

$$\frac{x - 3}{x^2 + 4x - 21}$$

$$\frac{(x + 2)(x - 1)(x + 4)}{(x - 3)(x + 2)}$$

$$\frac{2x^2 + 12x - 14}{x^2 + 4x - 21}$$

