

REVIEW - CIRCLE GEOMETRY (SECTION 4.4)  
ANSWERS

1. centre  $(6, -5)$ , radius  $= \sqrt{7}$

2.  $(x, y) \rightarrow (8x + 1, 8y + 6)$

3.  $x^2 + y^2 = 74$

4.  $(x - 9)^2 + y^2 = 8$

5.  $(x + 5)^2 + (y - 6)^2 = 49$

6.  $\left[ \frac{1}{10}(x + 2) \right]^2 + \left[ \frac{1}{10}(y + 5) \right]^2 = 1$

7.  $n = -12$

8.  $\left( \frac{1}{\sqrt{12}}x \right)^2 + \left( \frac{1}{\sqrt{12}}y \right)^2 = 1$

9.  $x^2 + y^2 - 6x + 14y + 53 = 0$

10. centre  $(-2, 2.5)$

11. centre  $(4, 0)$ , radius = 5

12.  $(x + 3)^2 + (y - 5)^2 = 30$

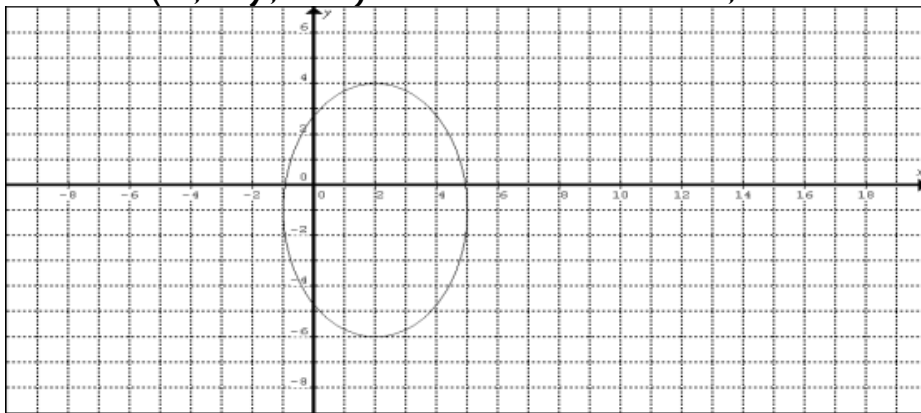
13.  $(x + 1)^2 + (y + 8)^2 = 144$

14.  $\left[ \frac{1}{4}(x+3) \right]^2 + \left[ \frac{1}{4}(y-2) \right]^2 = 1$

15.  $x^2 + y^2 - 2x + 6y - 106 = 0$

16.  $(x + 3)^2 + (y - 1)^2 = 25$

17. centre  $(2, -1)$ , major axis = 10 units, minor axis = 6 units



18.  $\left[ \frac{1}{8}(x+5) \right]^2 + \left[ \frac{1}{2}(y-3) \right]^2 = 1$

19a.  $\left[ \frac{1}{3}(x-1) \right]^2 + \left[ \frac{1}{2}(y-3) \right]^2 = 1$

b.  $\left[ \frac{1}{7}(x+2) \right]^2 + \left[ \frac{1}{4}(y-5) \right]^2 = 1$