

Workout

Question 1:

- (a) centre (3, 2) and radius 10
- (b) centre (1, -3) and radius 4
- (c) centre (-5, 7) and radius 2
- (d) centre (-6, -8) and radius 1
- (e) centre (0, 0) and radius 5
- (f) centre (-4, 0) and radius 3
- (g) centre (-2, 7) and radius $\sqrt{5}$
- (h) centre (6, 1) and radius $\sqrt{20}$

Question 2:

- (a) $(x - 2)^2 + (y - 7)^2 = 36$
- (b) $(x - 4)^2 + (y + 2)^2 = 9$
- (c) $(x + 1)^2 + (y - 3)^2 = 16$
- (d) $(x + 1)^2 + (y + 2)^2 = 81$
- (e) $x^2 + (y - 5)^2 = 25$
- (f) $x^2 + y^2 = 64$
- (g) $(x - 11)^2 + y^2 = 3$
- (h) $(x + 3)^2 + (y + 7)^2 = 8$

Question 3:

- (a) $(x - 4)^2 + (y - 3)^2 = 4$
- (b) $x^2 + (y + 1)^2 = 16$
- (c) $(x + 2)^2 + (y + 1)^2 = 1$
- (d) $(x + 1)^2 + (y - 1)^2 = 9$

Question 4:

- (a) yes
- (b) no
- (c) yes
- (d) no
- (e) yes

Question 5: $(-6, 0)$ and $(12, 0)$

Question 6: $(-3, 0)$ and $(5, 0)$

Question 7: $(-8, 0)$ and $(4, 0)$

Question 8: $(2 - \sqrt{67}, 0)$ and $(2 + \sqrt{67}, 0)$

Question 9: it does not intercept the x-axis

Apply

Question 1: $(x - 7)^2 + (y - 2)^2 = 100$

Question 2(a): $A(5, 4)$

Question 2(b): $(x - 5)^2 + (y - 4)^2 = 25$