

KNOWLEDGE:

K/ $\frac{\quad}{18}$ A/ $\frac{\quad}{7}$

1. Find the exact length of the line segment joining each pair of points:

State the length formula—1 mark.

(3, 7) and (15, 2)

(4)

2. Find the midpoint of the question above.

State the midpoint formula—1 mark

(3)

3. Write an equation for a circle with center (0,0) and radius 12.

(2)

4. a) Determine the radius of the circle $x^2 + y^2 = 81$, with center (0,0).

b) Determine if the point (5, -7) lies on the circle, inside the circle or outside the circle? Show your work.

(5)

5. One endpoint of a line segment is $(-2, 3)$. The midpoint of the line segment is $(1, 6)$. What is the other endpoint?

(4)

APPLICATION:

6. Given points $A(-1, 2)$, $B(3, 1)$ and $C(2, 5)$, determine whether $\triangle ABC$ is scalene, isosceles or equilateral. Show work in good form for full marks. (Draw a grid, if needed.)

(7)