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1. a) $\sqrt{5}$ b) 2

   c) $\sqrt{50}$ d) $\sqrt{45}$

   e) $\sqrt{10}$ f) $\sqrt{29}$

2. a) $\sqrt{13}$ b) $\sqrt{8}$

   c) 4 d) 3

3. ≈ 12.20 *units*

4. a) $d(0, M) = \sqrt{(x-0)^2 + (y-0)^2} = \sqrt{x^2 + y^2}$

   b) 1. $\sqrt{13}$ 2. $\sqrt{5}$ 3. 5

5. 15 *square units*

6. a) $m\overline{AB} = \sqrt{50}$, $m\overline{AC} = 5$ and $m\overline{BC} = 5$ so triangle ABC is isosceles.

   $\left(m\overline{AC}\right)^2 + \left(m\overline{BC}\right)^2 = \left(m\overline{AB}\right)^2$

   $5^2 + 5^2 = \left(\sqrt{50}\right)^2$

   $25 + 25 = 50$ so triangle ABC is a right triangle.

   b) Area = 12.5 *square units*

7. $d(\omega, A) = d(\omega, B) = d(\omega, C) = 5\ units$. Since all three points are the same distance from the centre, they must all lie on the same circle whose radius is 5 *units*.