

Past Paper Trig Equation Type Questions for Intermediate 2  
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Q1. Solve the equation. (giving your answers to the nearest degree)

$$4 \sin x^\circ - 2 = 0$$

$$0 < x^\circ < 360^\circ$$

( 3 marks )

Q2. Solve the equation. (giving your answers to the nearest degree)

$$6 \sin x^\circ + 4 = 0$$

$$0 < x^\circ < 360^\circ$$

( 3 marks )

Q3. Solve the equation. (giving your answers to the nearest degree)

$$4 \cos x^\circ - 3 = 0$$

$$0 < x^\circ < 360^\circ$$

( 3 marks )

Q4. Solve the equation. (giving your answers to the nearest degree)

$$7 \cos x^\circ + 5 = 0$$

$$0 < x^\circ < 360^\circ$$

( 3 marks )

Q5. Solve the equation. (giving your answers to the nearest degree)

$$9 \tan x^\circ - 8 = 0$$

$$0 < x^\circ < 360^\circ$$

( 3 marks )

Q6. Solve the equation. (giving your answers to the nearest degree)

$$5 \tan x^\circ + 3 = 0$$

$$0 < x^\circ < 360^\circ$$

( 3 marks )

Q7. The arms on a wind turbine rotate at a steady rate.

The height  $u$  metres, of a point A above the ground at time  $f$  seconds is given by the equation.

$$u = 7 + 2 \sin f^\circ$$



(a) Calculate the height of the point A at  $f = 20$  seconds

( 2 marks )

(b) Find the two time during the first turn of the arms when point A is at a height of

7.6 metres

( 4 marks )

Q8. At a fairground, the carriages on a big wheel ride rotate at a steady rate.

The height  $y$  metres, of a carriage above the ground at time  $h$  seconds is given by the equation.

$$y = 6 + 4 \cos h^\circ$$



(a) Calculate the height of the point A at  $h = 40$  seconds

( 2 marks )

(b) Find the two time during the first turn of the arms when point A is at a height of

8.7 metres

( 4 marks )