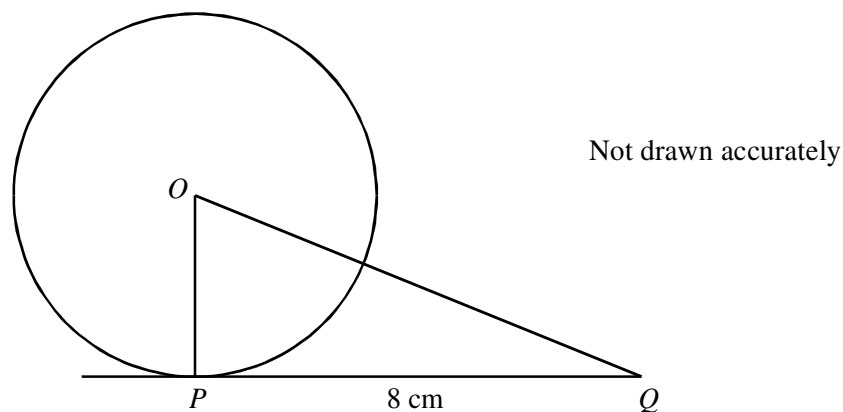


**HIGHER REVISION G**

1. Factorise  $y^2 - 4$
2. Solve  $(2x)^2 = 8$  Express your answer as an exact value.
3. Copy and complete :  
 To **increase** a value by 20% you must multiply the value by 1.2  
 To **decrease** a value by 20% you must multiply the value by.....
4. Solve  $4x + 6 = 9 + 8x$
5. Make  $v$  the subject of  $P = mu - mv$
6. Show using trial and improvement, that the equation  $x^3 = 20$  has a solution between 2 and 3. You must show at least 4 trials.

What is the value of  $x$  to **one decimal place**?

7. Expand and simplify  $5k(k - 4) - 2k(k + 1)$
8. Expand  $(2x + 1)(2x - 1)$
9.  $P$  is a point on the circumference of a circle with centre  $O$ .  $PQ$  is a tangent of length 8cm. The area of triangle  $OPQ$  is  $24\text{cm}^2$ .



Calculate the area of the circle. Give your answer in terms of  $\pi$ .

10. Rationalise  $\frac{1}{\sqrt{3}}$