



Solve the simultaneous equations

$$x + y = 3$$

$$x^2 + y^2 = 5$$

Ramy saves some of his pocket money each week.

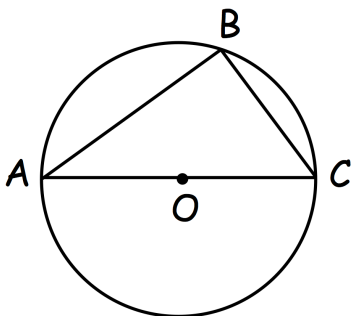
He saves 10p in week 1,  
16p in week 2, 22p in week 3 and so on for 40 weeks.

Find the amount he saves in week 40.

Calculate his total savings over the 40 weeks.

Rationalise the denominator of

$$\frac{\sqrt{5}}{\sqrt{3} + 2}$$



Prove that the angle in a semi-circle is always  $90^\circ$