**7th April** **Higher 5-a-day**

Corbettmaths

Solve $(x + 1)(x - 2) = 40$

$x^2 - 2x + x - 2 = 40$

$x^2 - x - 42 = 0$

$(x - 7)(x + 6) = 0$

$x = 7$ or $x = -6$

Simplify $\sqrt{10} \times \sqrt{3}$

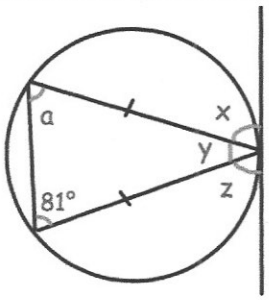
$\sqrt{30}$

Simplify $(\sqrt{3})^4$

$\sqrt{3} \times \sqrt{3} \times \sqrt{3} \times \sqrt{3}$

$= \sqrt{81}$

$= 9$




Find a, x, y and z

$x = 81°$

$a = 81°$

$z = 81°$

$y = 18°$

Expand and simplify

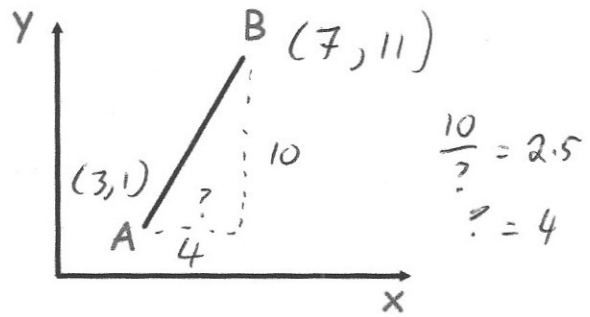
$(3x + 1)(x + 2)(x + 3)$

$(3x^2 + 6x + x + 2)(x + 3)$

$(3x^2 + 7x + 2)(x + 3)$

$3x^3 + 9x^2 + 7x^2 + 21x + 2x + 6$

$= 3x^3 + 16x^2 + 23x + 6$




$\frac{10}{?} = 2.5$

$? = 4$

A is the point (3, 1).
B is the point (a, 11).

The gradient of AB is $\frac{5}{2}$ 2.5

Work out the value of a.

$a = 7$