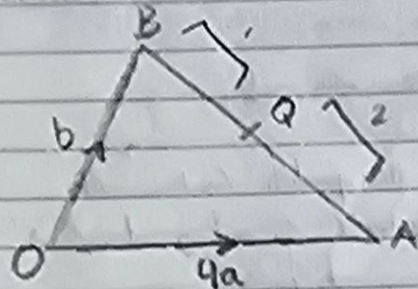


Starter



$\vec{BA}$

$$4a - b$$

$$\vec{BA} = 4a - b$$

$$\frac{4a - b}{3}$$

Completing the square

Ex: Change  $4x^2 + 16x + 5 \rightarrow$

- 1) Take the factor out of these numbers

$$\rightarrow 4(x^2 + 4x) + 5$$

- 2) OK, you see this bit,

$$x^2 + 4x$$

now we can "complete the square". In just three simple steps!

- i) Take  $x$ , just  $x$

- ii) Now divide the coefficient

of  $x$  by 2; thus

$$\frac{4}{2} = 2 \text{ so}$$

- iii) Now square it!

- 3) OK, we're not done yet, let's check what  $(x+2)^2$  actually is

- 4) OK, we have a problem, our original factorization only include the  $\Phi$  bit so we don't need 4 in the brackets! So, flip 4's sign, and put it outside the bracket!

- 5) Now, let's plug 'T' into our original formula!

- 6) Simplify

- 7) And You're done it! Good Job