

Completing the \square $a \neq 1$

A2

Warm up

1. $x^2 + 6x - 7$ CTS
2. $x^2 + 6x = 7$ solve for x by CTS

$a \neq 1$

What makes a perfect square?

ex $2x^2 + 6x + \dots$

1st: $2(x^2 + 3x + \dots)$ $b=3$
 $(b/2)^2 = 9/4$
 $2(x^2 + 3x + 9/4)$
 $2(x + 3/2)^2$

* divide out the a -value

ex 2 $3x^2 + 12x + \dots$

Completing the square

ex $2x^2 + 8x - 5$

$2(x^2 + 4x + \underline{\quad}) - 5 - \underline{\quad}$ divide a out of the x^2 & x term
 $2(x^2 + 4x + (b/2)^2) - 5 - (b/2)^2 \cdot a$

$2(x^2 + 4x + 4) - 5 - 8 \leftarrow (b/2)^2 \cdot a\text{-value}$
 $2(x+2)^2 - 13 \checkmark$