Name _____ Date _____

Choosing a Method

form of the equation	method
$x^2 = a,\ (x-p)^2 = a$	square root
$ax^2 + bx = 0$	factoring out
a trinomial that factorises easily	factorising
$a = 1$ and even b	completing the square
any quadratic equation	the formula (always works)

1 ON YOUR OWN Solve $x^2 - 2x - 8 = 0$ in three ways. Which was the quickest for you?

factorising **completing the square** **the formula**

2 ON YOUR OWN Do not solve. For each equation, write which method would be the quickest.

$5x^2 = 20$

$x^2 + 7x = 0$

$x^2 - 7x + 12 = 0$

$3x^2 - 5x - 1 = 0$

$(x-4)^2 = 3$

$x^2 + 6x - 1 = 0$

Names (pair) _____ Date _____

3 IN PAIRS Solve the equations from task 2 using the method you chose.

$5x^2 = 20$

$x_1 =$ ☐ $x_2 =$ ☐

$x^2 + 7x = 0$

$x_1 =$ ☐ $x_2 =$ ☐

$x^2 - 7x + 12 = 0$

$x_1 =$ ☐ $x_2 =$ ☐

$3x^2 - 5x - 1 = 0$

$x_1 =$ ☐ $x_2 =$ ☐

$(x - 4)^2 = 3$

$x_1 =$ ☐ $x_2 =$ ☐

$x^2 + 6x - 1 = 0$

$x_1 =$ ☐ $x_2 =$ ☐

4 IN PAIRS A photo is 10 cm wide and 15 cm tall. Around it is a frame of the same width x all round. The photo with its frame has an area of 266 cm². How wide is the frame?

★ ON YOUR OWN **Exit card.** Which method would you choose for $x^2 - 10x + 21 = 0$, and why? Solve it.