

1. Expand and simplify $(y - 4)(y + 5)$

$$(y - 4) \times (y + 5) =$$

The diagram illustrates the expansion of the quadratic expression $(y - 4)(y + 5)$ using the FOIL method. The first term y in the first binomial is connected by arrows to both terms in the second binomial, y and $+5$. The second term -4 in the first binomial is also connected by arrows to both terms in the second binomial.

y	$+5$
-4	

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2. Expand and simplify $(x + 2)(x - 3)$

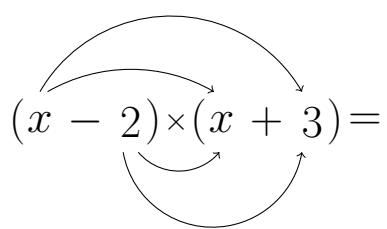
$$(x + 2) \times (x - 3) =$$

The diagram shows the expression $(x + 2) \times (x - 3) =$. Four curved arrows originate from the terms x , $+2$, -3 , and x respectively, and point to the terms x , -3 , $+2$, and -3 in the second binomial. This illustrates the application of the First, Outer, Inner, Last (FOIL) rule for expanding binomials.

x	—3
+2	

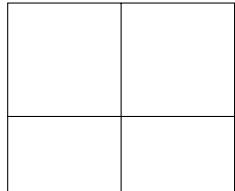
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3. Expand and simplify $(x - 2)(x + 3)$

$$(x - 2) \times (x + 3) =$$


$$\begin{array}{c} x \quad +3 \\ \hline x \\ -2 \end{array}$$

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4. Expand and simplify $(k - 3)(k + 5)$

$$(k - 3) \times (k + 5) =$$

k	$+5$
-3	

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Answers

1. $y^2 + y - 20$

2. $x^2 - x - 6$

3. $x^2 + x - 6$

4. $k^2 + 2k - 15$