

Warm Up Questions

1. $x^2 - 1x - 56$
2. $2p^2 - 10p + 12$
3. $6x^2 + 5x - 6$
4. $20b^2 + 7b - 3$

1. $x^2 - 1x - 56$

$$\underline{-8} \times \underline{7} = -56 \quad \rightarrow \text{Diff}$$

$$\underline{-8} + \underline{7} = -1 \quad \rightarrow \text{Big } \ominus$$

$$(x - 8)(x + 7)$$

$$-8 \times 7$$

$$2. \quad 2p^2 - 10p + 12$$

$$\begin{aligned} & \underline{-2} \times \underline{-3} = +6 & 2(p^2 - 5p + 6) \\ & \underline{-2} + \underline{-3} = -5 & = 2(p-2)(p-3) \end{aligned}$$

3.

$$6x^2 + 5x - 6$$

$$\begin{aligned} \underline{-4} \times \underline{9} &= \ominus 36 \quad \rightarrow \text{Diff} \\ \underline{-4} + \underline{9} &= \oplus 5 \quad \rightarrow \text{Big} \end{aligned}$$

$$\left(\frac{6x-4}{6} \right) \left(\frac{x+9}{6} \right)$$

$$\left(x - \frac{2}{3} \right) \left(x + 3 \right)$$

$$(3x-2)(2x+3)$$

$$\begin{aligned} 6x^2 + 9x - 4x - 6 \\ 6x^2 + 5x - 6 \end{aligned}$$

$$\begin{aligned} -1 \times 36 \\ -2 \times 18 \\ -3 \times 12 \\ -4 \times 9 \end{aligned}$$

4.

$$20b^2 + 7b - 3$$

$$\begin{aligned} \underline{-5} \times \underline{12} &= \ominus 60 \quad \rightarrow \text{Diff} \\ \underline{-5} + \underline{12} &= \oplus 7 \quad \rightarrow \text{Big } \oplus \end{aligned}$$

$$\frac{20b - 5}{20} \cdot \frac{20b + 12}{20}$$

$$\left(b - \frac{1}{4}\right) \left(b + \frac{3}{5}\right)$$

$$= (4b - 1)(5b + 3)$$

-	1	x	60
-	2	x	30
-	3	x	20
-	4	x	15
-	5	x	12