

3.3 6. Use algebra tiles to factor $12p + 18$.

Model $12p + 18$ as a rectangle.

Since _____ is the GCF of 12 and 18, make _____ equal rows.
Sketch the tiles. Label the length and width.

The length of the rectangle is _____.

The width of the rectangle is _____.

So, $12p + 18 =$ _____

7. Use division to factor each polynomial.

a) $9x^2 - 12x$

Factor each term of the binomial.

$$9x^2 = \underline{\hspace{1cm}} \times \underline{\hspace{1cm}} \times \underline{\hspace{1cm}} \times \underline{\hspace{1cm}}$$

$$12x = \underline{\hspace{1cm}} \times \underline{\hspace{1cm}} \times \underline{\hspace{1cm}} \times \underline{\hspace{1cm}}$$

The GCF is $\underline{\hspace{1cm}} \times \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$.

Divide each term of the binomial by _____.

$$\begin{array}{r} \underline{9x^2 - 12x} = \\ \underline{\hspace{1cm}} \quad \underline{\hspace{1cm}} \quad \underline{\hspace{1cm}} \quad \underline{\hspace{1cm}} \end{array}$$

$$= \underline{\hspace{1cm}} - \underline{\hspace{1cm}}$$

$$\text{So, } 9x^2 - 12x = \underline{\hspace{1cm}}$$

b) $-10m^2 - 15m + 5$

Factor each term of the trinomial.

$$10m^2 = \underline{\hspace{1cm}} \times \underline{\hspace{1cm}} \times \underline{\hspace{1cm}} \times \underline{\hspace{1cm}}$$

$$15m = \underline{\hspace{1cm}} \times \underline{\hspace{1cm}} \times \underline{\hspace{1cm}}$$

$$5 = \underline{\hspace{1cm}}$$

The GCF is _____.

Divide each term of the trinomial by _____.

$$\begin{array}{r} \underline{-10m^2 - 15m + 5} = \\ \underline{\hspace{1cm}} \quad \underline{\hspace{1cm}} \quad \underline{\hspace{1cm}} \quad \underline{\hspace{1cm}} \end{array}$$

$$= \underline{\hspace{1cm}}$$

$$\text{So, } -10m^2 - 15m + 5 = \underline{\hspace{1cm}}$$

Remove -1 as a common factor.

$$\underline{\hspace{1cm}} = \underline{\hspace{1cm}} (\underline{\hspace{1cm}} + \underline{\hspace{1cm}} - \underline{\hspace{1cm}})$$

$$\text{So, } -10m^2 - 15m + 5 = \underline{\hspace{1cm}}$$