Check Up

1. Factor each of the following trinomials.

   a. $5x^3 - 40x^2 + 75x$

   b. $2x^2 + 3xy - 2y^2$

Compare your answers.

1. Factor each of the following trinomials.

   a. $5x^3 - 40x^2 + 75x$

   $5x$ is the GCF of $5x^3 - 40x^2 + 75x$.

   $5x^3 - 40x^2 + 75x = 5x(x^2 - 8x + 15)$

   The integers –5 and –3 have a product of 15 and a sum of –8.

   $5x(x^2 - 8x + 15) = 5x(x - 5)(x - 3)$

   b. $2x^2 + 3xy - 2y^2$

   $ac = -4$ and $b = 3$

   The integers 4 and –1 have a product of –4 and a sum of 3.

$$\begin{aligned} 2x^2 + 3xy - 2y^2 &= 2x^2 + 4xy - xy - 2y^2 \\ &= (2x^2 + 4xy) + (-xy - 2y^2) \\ &= 2x(x + 2y) - y(x + 2y) \\ &= (x + 2y)(2x - y) \end{aligned}$$