

# 9.8 Factor Completely

\*GCF

What's in common? Factor it out.

$$\textcircled{1} \overset{\div y}{2xy} - \overset{\div y}{3y}$$

GCF:  $y$

$$y(2x - 3)$$

$$\textcircled{2} \overset{\div z}{3y^2z} + \overset{\div z}{5z}$$

GCF:  $z$

$$z(3y^2 + 5)$$

$$\textcircled{3} \overset{\div (x+4)}{2x(x+4)} - \overset{\div (x+4)}{3(x+4)}$$

GCF:  $(x+4)$

$$(x+4)(2x - 3)$$

$$\textcircled{4} \overset{\div (y-2)}{3y^2(y-2)} + \overset{\div (y-2)}{5(y-2)}$$

GCF:  $(y-2)$

$$(y-2)(3y^2 + 5)$$

# Homework Factor

$$\textcircled{3} x(x-8) + 2(x-8)$$

$$\textcircled{7} b^2(b+5) - 3(b+5)$$

$$\textcircled{11} 3n^2 - 17n + 10$$

$$\textcircled{5} 6z(z-4) - 7(z-4)$$

$$\textcircled{9} x \overset{\times(x+13)}{(x+13)} - \overset{\times(x+13)}{(x+13)}$$

$$\textcircled{13} 6y^2 - 5y - 1$$

Solve

$$\textcircled{15} 10c^2 - 14c + 4 = 0$$

$$2(5c^2 - 7c + 2) = 0$$

$$2(c-1)(5c-2) = 0$$

$$c-1=0 \quad 5c-2=0$$

$$c=1$$

$$c = \frac{2}{5}$$

$$\textcircled{19} 81c^2 - 4 = 0$$

$$\textcircled{17} x^2 + 8x + 16 = 0$$

$$\textcircled{21} -2h^2 + 28h - 98 = 0$$

$$\text{GCF: } -2$$

$$-2(h^2 - 14h + 49) = 0$$

$$-2(h-7)(h-7) = 0$$

$$h-7=0 \quad h-7=0$$

$$h=7 \quad h=7$$