

$$\textcircled{26} \quad 5d^6 + 2d^5$$

$$d^5 (5d + 2)$$

$$\frac{5d^6}{d^5} = 5d \quad \frac{2d^5}{d^5} = 2$$

$$\textcircled{42} \quad 18s^2t^5 - 2s^3t \quad 2s^2t(9t^4 - s)$$

$$\begin{array}{ccc} 18 & 2 & \rightarrow 2 \\ s^2 & s^3 & \rightarrow s^2 \\ t^5 & t & \rightarrow t \end{array}$$

$$\frac{18s^2t^5}{2s^2t} = 9t^4$$

$$\frac{-2s^3t}{2s^2t} = -s$$

(-1s')

$$\begin{array}{ccc} 2a^2b - 4b + 19 \\ 3 \quad \quad 1 \quad \quad 0 \\ \hline \end{array}$$

degree 3

$$\begin{aligned} & x^2(7x+5) - (2x+6)(x-1) \\ & (7x^3 + 5x^2) + (-2x^2 + 2x + 6x + 6) \\ & 7x^3 + 3x^2 + 8x + 6 \end{aligned}$$

The image shows a handwritten expansion of the binomial square $(2x-7)^2$. The expression is written as $(2x-7)^2 + (2x)^2$. A red arrow points from the $2x$ term in the first binomial to the $(2x)^2$ term. A blue arrow points from the -7 term in the first binomial to the $(-7)^2$ term. A green arrow points from the $2x$ term in the first binomial to the -7 term in the second binomial, indicating the cross term. The expansion is shown as:

$$\begin{array}{rcl} (2x-7)^2 + (2x)^2 & = & 4x^2 \\ + 2x \cdot -7 \cdot 2 & = & -28x \\ + (-7)^2 & = & 49 \\ \hline 4x^2 - 28x + 49 & & \end{array}$$

$$\begin{array}{rcl} (3x+7)(3x-7) & & \\ \swarrow \quad \searrow & & \\ (3x)^2 & = & 9x^2 \\ + (-7)^2 & = & 49 \\ \hline 9x^2 - 49 & & \end{array}$$

	B	r
B	BB .25	Br .25
r	Br .25	rr .25

.25 BB
.50 Br
.25 rr

$$\left. \begin{array}{l} .25 BB \\ .50 Br \\ .25 rr \end{array} \right\} .25B^2 + .5Br + .25r^2$$

GCF and Solving Polynomial Practice:

p. 578, 27-38

1. Factor out the GCF (variable and constant)
2. Set each factor = 0
3. Solve each sub-equation to find the solutions

$$(x+2)(x-4)=0$$

$$x+2=0 \quad x-4=0$$

$$x=-2 \text{ or } x=4$$

$$-12p^2 + 30p = 0$$

$$6p(-2p+5)=0$$

$$6p=0$$

$$p=0$$

or

$$-2p+5=0$$

$$-2p=-5$$

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

$$5w^2 - 5w = 0$$

$$5w(w - 1) = 0$$

$$\frac{5w^2}{5w} = w \quad \frac{-5w}{5w} = -1$$

$$\frac{5w}{5} = 0 \quad \text{or} \quad \frac{w-1}{+1 \quad +1} = 0$$

$$w = 0 \quad \text{or} \quad w = 1$$

1. Factor ✓
2. Use ZPP ✓
3. Solve ✓

$$-32y^2 - 24y = 0$$

$$8y(-4y - 3) = 0$$

- Factor ✓
- ZPP
- Solve

$$\frac{-32y^2}{8y} = -4y$$

$$\frac{-24y}{8y} = -3$$

$$\frac{8y}{8} = 0$$
$$y = 0$$

OR

$$-4y - 3 = 0$$
$$\frac{-4y}{-4} = \frac{3}{-4}$$
$$y = -\frac{3}{4}$$