

O: 1, 3, 4

N: 1

$$1. 3z^2 + 6z$$

$$\text{gcf: } 3z$$

$$3z \left(\frac{\cancel{3z^2}}{\cancel{3z}} + \frac{6z}{3z} \right)$$

$$3z(z + 2)$$

$$3. 9ay^2 - 15a^2y$$

$$\text{gcf: } 3ay$$

$$3ay \left(\frac{9ay^2}{\cancel{3ay}} - \frac{15a^2y}{\cancel{3ay}} \right)$$

$$3ay(3y - 5a)$$

$$1. 16x^3 - 64x^2$$

$$\text{gcf: } 16x^2$$

$$16x^2(x - 4)$$

HW Assess

1/18

2. $6x^2y^2 + 8x^3y$

Factor

$$\begin{aligned}
 & (x+3)^2 \\
 & (x+3)(x+3) \\
 & x^2 + 3x + 3x + 9 \\
 & \quad \quad \quad \color{red}{2 \cdot 3 \cdot x} \\
 & \color{red}{x^2} + 6x + \color{red}{9} \\
 & \quad \downarrow \quad \quad \downarrow \\
 & \quad x^2 \quad \quad 3^2
 \end{aligned}$$

$$\begin{aligned}
 & (4x+5)^2 \\
 & (4x+5)(4x+5) \\
 & 16x^2 + 20x + 20x + 25 \\
 & \quad \quad \quad \color{blue}{16x^2} \quad \color{blue}{40x} \quad \color{blue}{25} \\
 & \quad \quad \quad \color{blue}{(4x)^2} \quad \color{blue}{2(4x)(5)} \quad \color{blue}{(5)^2}
 \end{aligned}$$

$$\begin{aligned}
 & (a+b)(a+b) \\
 & a^2 + ab + ab + b^2 \\
 & a^2 + 2ab + b^2
 \end{aligned}$$

$$(a+b)^2 = a^2 + 2ab + b^2$$

$$\begin{aligned}
 & x^2 + 14x + 49 \\
 & \quad \quad \quad \color{red}{2 \cdot x \cdot 7} \quad \quad \color{red}{7^2} \\
 & \color{red}{(x+7)^2} \\
 \\
 & 4x^2 + 4x + 1 \\
 & \quad \quad \quad \color{red}{2 \cdot 2x \cdot 1} \quad \quad \color{red}{1} \\
 & \color{red}{(2x+1)^2}
 \end{aligned}$$

$$(a-b)^2$$

$$(a-b)(a-b)$$

$$a^2 - ab - ab + b^2$$

$$a^2 - 2ab + b^2$$

$$(a-b)^2 = a^2 - 2ab + b^2$$

$$t^2 - 12t + 36$$

$$(t-6)^2$$

$$16x^2 + 40xy + 25y^2$$

$$a=4x$$

$$b=5y$$

$$(a+b)^2$$

$$(4x+5y)^2$$

HW: p. 186 #7, 8, 11, 12