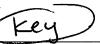
Name:



Show all work clearly and in order. Please box your answers. 10 minutes.

1. The product $(x-2)(x^2+2y)$ simplifies to which of the following? (Circle one)

D.
$$x^3 - 4u^2$$

2. The product $4x^3yz^5 \cdot 6y^3z$ simplifies to which of the following? (Circle one)

product
$$4x^3yz^5 \cdot 6y^3z$$
 simplifies to which of the following A. $12x^3y^4z^6$
B. $24x^3y^3z^5$
C. $12x^3y^3z^5$
D. $24x^3y^4z^6$
 $24x^3y^4z^6$

3. Factor: $4x^2 + 16x + 15$

SOL1: Factor by gressing
$$\begin{array}{c}
\text{Sol2: By grouping:} \\
\text{Multiply ac} = 4.15 = 60 \\
\text{Find two factors of 60 that sum to 16: 6 and 10} \\
\text{H} \times^2 + 6 \times + 10 \times + 15 \\
\text{2x}(2 \times + 3) + 5(2 \times + 3)
\end{array}$$

4. Write the following as a single simplified fraction:

$$\frac{5x^3y^2}{2wz^4} \cdot \frac{8w^2y^5}{7x^2z^3} = \frac{40 \times ^3 y^7 \omega^2}{14 \times ^2 z^3 \omega}$$
$$= \frac{20 \times y^7 \omega}{7 z^7}$$

5. Write the following as a single simplified fraction:

$$\frac{5}{x-2} - \frac{4x}{x+3}$$

$$= \frac{5(x+3)}{(x-2)(x+3)} - \frac{4x(x-2)}{(x+3)(x-2)}$$

$$= \frac{5(x+3) - 4x(x-2)}{(x-2)(x+3)} = \frac{5x+15 - 4x^2 + 8x}{(x-2)(x+3)}$$

$$= \frac{-4x^2 + 13x + 15}{(x-2)(x+3)}$$