

ANSWER KEY

I. $ax^2 + bx$

$$= x(ax + b)$$

2. $16x^5 - 144x^3$

$$= [(4x^2)^2 - (12x)^2]$$

$$= [4x^2 + 12x] [4x^2 - 12x]$$

3. $a^4 - b^4$

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

II. 1. $\frac{\cancel{8}(2x-5)}{\cancel{8}}$

$$= 2x - 5$$

2. $\frac{\cancel{8}x^4}{\cancel{8}6x} = \frac{1x^3}{2}$

3. $\frac{\cancel{12}a^6b^8}{-\cancel{6}a^6b^4} = 2a^2b^4$

III. i. $(a-4)(a-2) = a^2 - 8$

$$a^2 - 2a - 4a + 8 = a^2 - 8$$

$$a^2 - 6a + 8 \neq a^2 - 8.$$

ii. $(2a + 3b)(a - b)$

$$2a^2 - 2ab + 3ab - 3b^2$$

$$2a^2 + ab - 3b^2$$

$$\neq 2a^2 - 3b^2$$

2. $(5p^2 - 25p + 20) \div (P-1)$

$$\frac{5p^2 - 25p + 20}{5p(p-1) - 20(p-1)}$$

$$\frac{\cancel{5}(p-1)(5p-20)}{\cancel{5}(p-1)} = 5p - 20$$



5 20