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

Factor

$(x+4)^2$

$(x+4)(x+4)$

$x^2+4x+4x+16$

$x^2+8x+16$

x^2+8x+4^2

$x^2+2\cdot 4\cdot x+4^2$

$(x+3)^2$

$(x+3)(x+3)$

$x^2+3x+3x+9$

x^2+6x+9

$x^2+2\cdot 3\cdot x+3^2$

$$\boxed{(a+b)^2=a^2+2ab+b^2}$$

✓ x^2+4x+4 (x, $2\cdot 2x$, 2^2)

✗ x^2+6x+4^2 (x, $2\cdot 2x$, 2^2)

✗ $6x^2+10x+9$

✓ $25y^2+10y+1$ ($5y$, $2\cdot 5y\cdot 1$, 1)

✓ $t^2+12t+36$ (t, $2\cdot 1\cdot 6$, 6)

✗ $t^2+8t+30$ not p.s

x^2+4x+4 (x, $+2\cdot 2x$, 2)

$(a+b)^2$

$a=x$ $b=2$

$\boxed{(x+2)^2}$

$x^2+14x+49$ (x, $2\cdot 7\cdot x$, 7)

$(x+7)^2$

check: $(x+7)(x+7)$

$x^2+7x+7x+49$

$x^2+14x+49$ ✓

$$(a-b)^2$$

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

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

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

$$\boxed{(a-b)^2=a^2-2ab+b^2}$$

$b \quad 2\cdot b\cdot 5 \quad 5$

$$b^2-10b+25$$

$$(b-5)^2$$

$2s \quad 1$

$$4s^2-4s+1$$

$$(2s-1)^2$$

$3x \quad 2\cdot 3x\cdot 4 \quad 4$

$$9x^2-24x+16$$

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

$(x+3)(x-3)$

$x^2 \cancel{-3x+3x} - 9$

$x^2 - 9$ ← difference of squares

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

$16x^2 - 1$

$(4x+1)(4x-1)$