

STATION III

DO NOT SOLVE!

① $64x^3 - 125$

a) $(4x)^3 - (5)^3$

b) $a = 4x$ $b = 5$ $ab = 20x$

$a^2 = 16x^2$ $b^2 = 25$

c) $(4x-5)(16x^2+20x+25)$

② $27x^3 + 343$

a) $(3x)^3 + (7)^3$

b) $a = 3x$ $b = 7$ $ab = 21x$

$a^2 = 9x^2$ $b^2 = 49$

c) $(3x+7)(9x^2-21x+49)$

STATION IV DO NOT SOLVE!

① $x^4 - 18x^2 + 81$

~~$$\begin{array}{r} 81 \\ -9 \end{array}$$

$$\begin{array}{r} x^2 - 9 \\ -9 \end{array}$$

$$\begin{array}{r} -18 \end{array}$$~~

$$(x^2 - 9)(x^2 - 9)$$
~~$$\begin{array}{r} -9 \\ -3 \end{array}$$

$$\begin{array}{r} -3 \\ 0 \end{array}$$~~

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

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

② $x^4 - x^2 - 56$

~~$$\begin{array}{r} -56 \\ -8 \end{array}$$

$$\begin{array}{r} x^2 - 8 \\ -8 \end{array}$$

$$\begin{array}{r} -1 \end{array}$$~~

$$(x^2 - 8)(x^2 + 7)$$