

Multiply
without a
Calculator

1) 32×21

2) 54×13

3) 17×49

4) 123×213

$$\begin{array}{r} 6 \\ 49 \\ \times 17 \\ \hline 343 \\ 49 \\ \hline 833 \end{array}$$

$$\begin{array}{r} 4x + 9 \\ + 7 \\ \hline +28x + 63 \\ 4x^2 + 9x \\ \hline 4x^2 + 37x + 63 \end{array}$$

$$2^3 = 2 \cdot 2 \cdot 2$$

$$X^2 = X \cdot X$$

$$X^2 \cdot X^1 = X \cdot X \cdot X = X^3$$

$$\begin{array}{r} 32 \\ \times 21 \\ \hline 32 \\ 640 \\ \hline 672 \end{array}$$

$$\begin{array}{r} 3x + 2 \\ 2x + 1 \\ \hline +3x + 2 \\ 6x^2 + 4x \\ \hline 6x^2 + 7x + 2 \end{array}$$

$$\begin{array}{r}
 1 \\
 54 \\
 \times 13 \\
 \hline
 162 \\
 540 \\
 \hline
 702
 \end{array}$$

$$\begin{array}{r}
 5x + 4 \\
 \underline{x + 3} \\
 +15x + 12 \\
 5x^2 + 4x \\
 \hline
 5x^2 + 19x + 12
 \end{array}$$

$$x^2 \cdot x = x \times x = x^3$$

$$\begin{array}{r}
 3x^2 - 3x + 2 \\
 2x^2 + 7x - 5 \\
 \hline
 -15x^2 + 15x - 10 \\
 +21x^3 - 21x^2 + 14x \\
 6x^4 - 6x^3 + 4x^2 \\
 \hline
 6x^4 + 15x^3 - 32x^2 + 29x - 10
 \end{array}$$

$$\begin{array}{r}
 x^2 + 2x + 3 \\
 2x^2 + x + 3 \\
 \hline
 3x^2 + 6x + 9 \\
 x^3 + 2x^2 + 3x \\
 2x^4 + 4x^3 + 6x^2 \\
 \hline
 2x^4 + 5x^3 + 11x^2 + 9x + 9
 \end{array}$$

$$\begin{array}{r}
 123 \\
 \times 213 \\
 \hline
 369 \\
 1230 \\
 24600 \\
 \hline
 \end{array}$$

$$x^2 = x \cdot x$$

$$\begin{aligned}
 x^3 \cdot x &= x \cdot x \cdot x \\
 &= x^3
 \end{aligned}$$

$$3x^2 + 4x - 3$$

$$6x^2 - 2x + 8$$

$$\hline +24x^2 + 32x - 24$$

$$-6x^3 - 8x^2 + 6x$$

$$18x^4 + 24x^3 - 18x^2$$

$$\hline 18x^4 + 18x^3 - 2x^2 + 38x - 24$$

multiply

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

$$\begin{array}{r} x^2+2x-3 \\ x-3 \\ \hline x^3-3x^2-6x+9 \\ x^3+2x^2-3x \\ \hline x^3-x^2-9x+9 \end{array}$$

multiply

$$3x(5x^2-2x+1)$$

$$\begin{array}{r} 5x^2-2x+1 \\ 3x \\ \hline 15x^3-6x^2+3x \end{array}$$

Hw
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