

Math 20-2 Factoring Skills

A. Diamond Math: The top number is the **PRODUCT** of the left and right cells while the bottom number is the **SUM**.

(1) $\begin{array}{c} \diagup \quad 24 \quad \diagdown \\ \diagdown \quad 10 \quad \diagup \end{array}$

(2) $\begin{array}{c} \diagup \quad -63 \quad \diagdown \\ \diagdown \quad 2 \quad \diagup \end{array}$

(3) $\begin{array}{c} \diagup \quad -10 \quad \diagdown \\ \diagdown \quad -3 \quad \diagup \end{array}$

(4) $\begin{array}{c} \diagup \quad 4 \quad \diagdown \\ \diagdown \quad 5 \quad \diagup \end{array}$

(5) $\begin{array}{c} \diagup \quad 56 \quad \diagdown \\ \diagdown \quad 15 \quad \diagup \end{array}$

(6) $\begin{array}{c} \diagup \quad 50 \quad \diagdown \\ \diagdown \quad 15 \quad \diagup \end{array}$

(7) $\begin{array}{c} \diagup \quad 35 \quad \diagdown \\ \diagdown \quad 12 \quad \diagup \end{array}$

(8) $\begin{array}{c} \diagup \quad 40 \quad \diagdown \\ \diagdown \quad -13 \quad \diagup \end{array}$

(9) $\begin{array}{c} \diagup \quad 10 \quad \diagdown \\ \diagdown \quad -11 \quad \diagup \end{array}$

(10) $\begin{array}{c} \diagup \quad 42 \quad \diagdown \\ \diagdown \quad 13 \quad \diagup \end{array}$

(11) $\begin{array}{c} \diagup \quad -56 \quad \diagdown \\ \diagdown \quad -1 \quad \diagup \end{array}$

(12) $\begin{array}{c} \diagup \quad 54 \quad \diagdown \\ \diagdown \quad 15 \quad \diagup \end{array}$

(13) $\begin{array}{c} \diagup \quad -7 \quad \diagdown \\ \diagdown \quad 6 \quad \diagup \end{array}$

(14) $\begin{array}{c} \diagup \quad 32 \quad \diagdown \\ \diagdown \quad 12 \quad \diagup \end{array}$

(15) $\begin{array}{c} \diagup \quad 54 \quad \diagdown \\ \diagdown \quad 15 \quad \diagup \end{array}$

(16) $\begin{array}{c} \diagup \quad 18 \quad \diagdown \\ \diagdown \quad -11 \quad \diagup \end{array}$

B. Factoring Quadratics with decomposition: use diamond math skills [multiply and add to equal]

$$x^2 + 16x + 28$$

$$x^2 + 2x - 48$$

$$4x^2 + 15x + 9$$

$$2x^2 - 9x + 10$$