

Today's Plan:

Learning Target (standard): I will simplify polynomial expressions and factor them.

Students will: Complete practice problems over previous concepts at the boards, put up homework problems on the board and make necessary corrections to their own work and take a test.

Teacher will: Provide practice problems over previous concepts, check homework problems for accuracy and provide students feedback and provide test problems.

Assessment: Board work, homework check and test

Differentiation: Students will work at the board, go over and correct homework at their seats and actively engage in test problems.

Factor.

$$1) 5x^2 + 23x - 10 = (x + 5)(5x - 2)$$

$$2) 6x^2 - 2x - 20 = 2(3x + 5)(x - 2)$$

$$3) 4x^2 + 62x - 32 = 2(x + 16)(2x - 1)$$

$$4) 5x^2 - 17x + 14 = (5x - 7)(x - 2) \text{ order does not matter}$$

$$5) 3x^2 + 9x - 84 = 3(x + 7)(x - 4)$$

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$$2(3x^2 - x - 10)$$

$$\begin{array}{c} 30 \\ \wedge \\ 5 - 6 = -1 \end{array}$$

$$\underline{3x^2 + 5x} - \underline{6x - 10}$$

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

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

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$$2(2x^2 + 31x - 16)$$

$$\begin{array}{c} 32 \\ \wedge \\ 32 - 1 = 31 \end{array}$$

$$\underline{2x^2 + 32x} - \underline{x - 16}$$

$$2x(x+16) - 1(x+16)$$

$$2(x+16)(2x-1)$$

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$$3(x^2 + 3x - 28)$$

$$x^2 + 7x - 4x - 28$$

$$\begin{array}{c} 28 \\ \swarrow \searrow \\ 7 \quad -4 = 3 \end{array}$$

$$x(x+7) - 4(x+7)$$

$$3(x+7)(x-4)$$

Completely Factor.

$$a^2bc - 4bc + a^2b - 4b$$

$$\frac{a^2b}{b} + \frac{a^2bc}{b} - \frac{4b}{b} - \frac{4bc}{b}$$

$$b \left(\frac{a^2 + a^2c}{a} - \frac{4 - 4c}{-4} \right)$$

$$b \left(a^2(1+c) - 4(1+c) \right)$$

$$b(1+c)(a^2-4)$$

$$b(c+1)(a+2)(a-2)$$

Completely Factor.

$$y^4 - 2y^2 - y^3$$

$$\frac{y^4}{y^2} - \frac{y^3}{y^2} - \frac{2y^2}{y^2}$$

$$y^2(\underline{y^2 - y - 2})$$

$$\begin{array}{c} 2 \\ \wedge \\ 1 - 2 = -1 \end{array}$$

$$\begin{array}{l} \downarrow \\ y^2 + y - 2y - 2 \\ \downarrow -2 \end{array}$$

$$\downarrow \underline{y(y+1)} - 2\underline{(y+1)}$$

$$y^2(y+1)(y-2)$$