

# 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.

## Bell Ringer:

\* Remember to check for a GCF first!!

### Factor.

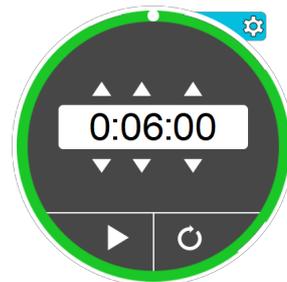
1)  $5x^2 + 23x - 10$

2)  $6x^2 - 2x - 20$

3)  $4x^2 + 62x - 32$

4)  $5x^2 - 17x + 14$

5)  $3x^2 + 9x - 84$



Factor.

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

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

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

$$4) 5x^2 - 17x + 14 = (5x - 7)(x - 2)$$

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

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

$$\begin{array}{c} 30 \\ \swarrow \searrow \\ 5 \quad -6 \\ 5 - 6 = -1 \end{array}$$

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

$$\underline{x(3x+5)} \quad \underline{-2(3x+5)}$$

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

Factor.

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

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

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

$$4) 5x^2 - 17x + 14 = (5x - 7)(x - 2)$$

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

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

$$\begin{array}{c} 32 \\ \swarrow \searrow \\ 32 \quad -1 \\ 32 - 1 = 31 \end{array}$$

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

$$\underline{2x(x+16)} \quad \underline{-1(x+16)}$$

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

Factor.

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

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

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

$$4) 5x^2 - 17x + 14 = (5x - 7)(x - 2)$$

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

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

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

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

$$\begin{array}{r} x(x+7) - 4(x+7) \\ \hline \end{array}$$

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

Completely Factor.

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

$$\begin{array}{r} a^2b + a^2bc - 4b - 4bc \\ \hline b \quad b \quad b \quad b \end{array}$$

$$b \left( \begin{array}{r} a^2 + a^2c - 4 - 4c \\ \hline a \quad -4 \end{array} \right)$$

$$\begin{array}{r} a^2(1+c) - 4(1+c) \\ \hline \end{array}$$

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

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

Completely Factor.

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

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

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

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

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

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

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