Students are not required to complete all the problems within this lesson. They should spend 45 minutes on this lesson.

E – Learning Day 4

For today’s E learning day you will be focusing on Factoring Quadratic Expressions when A is 1. Follow the steps below for the day.

• Read through the guided notes and fill them in along with the answer key provided.
• Complete the practice problems at the end of the lesson that go along with the notes.

Factoring Quadratics Notes

Figure out the missing values. The 2 numbers should multiply to the top number and add to the bottom number.

\[
\begin{array}{cccc}
20 & -30 & -15 & 18 \\
12 & 7 & -2 & -11 \\
\end{array}
\]

Standard Form for Quadratic: \(Ax^2 + Bx + C\)

** This Method can be used when A = 1 (leading coefficient)
Quadratic: $x^2 + 7x + 12$

\[
a = \_
\]
\[
b = \_
\]
\[
c = \_
\]

Factored form: ___________________________

Quadratic: $x^2 - 6x + 5$

\[
a = \_
\]
\[
b = \_
\]
\[
c = \_
\]

Factored form: ___________________________

Quadratic: $x^2 - 9x + 18$

\[
a = \_
\]
\[
b = \_
\]
\[
c = \_
\]
Factored form: ___________________________

** Use these to fill in the notes above.

** Factoring Quadratics Notes

Figure out the missing values. The 2 numbers should multiply to the top number and add to the bottom number.

\[
\begin{array}{cccc}
10 & 20 & 2 & 12 \\
10 & -30 & -3 & 7 \\
3 & -15 & -5 & -2 \\
9 & 18 & -11 & -2 \\
\end{array}
\]

Standard Form for Quadratic: \(Ax^2 + Bx + C\)

** This Method can be used when \(A = 1\) (leading coefficient)
Quadratic: $x^2 + 7x + 12$

\[ a = \frac{1}{1} \]
\[ b = \frac{7}{4} \times \frac{3}{8} \]
\[ c = \frac{12}{2} \times \frac{7}{1} \]

Factored form: $(x+4)(x+3)$

Quadratic: $x^2 - 6x + 5$

\[ a = \frac{1}{1} \]
\[ b = -\frac{6}{-5} \times -\frac{1}{-1} \]
\[ c = \frac{5}{-6} \times -\frac{1}{-1} \]

Factored form: $(x-5)(x-1)$

Quadratic: $x^2 - 9x + 18$

\[ a = \frac{1}{1} \]
\[ b = -\frac{9}{-6} \times -\frac{3}{-9} \]
\[ c = \frac{18}{-9} \times -\frac{3}{-9} \]
Factored form: 

\[(x-\phi)(x-3)\]

FND Alg. 1B - E Learning Day 4 Practice

**Factoring Trinomials Review (when a = 1)**

1) \(x^2 + 8x + 7\)

2) \(x^2 + 7x + 12\)

3) \(x^2 + 16x + 64\)

4) \(x^2 - 5x + 6\)

5) \(x^2 + 4x - 12\)

6) \(x^2 - 22x + 121\)
7) $x^2 - 2x - 8$

8) $x^2 + 9x - 22$

9) $x^2 + 9x + 18$

10) $x^2 - 11x - 26$

11) $x^2 + 4x - 60$

12) $x^2 + 11x + 28$