Warm Up:

Solve for x:

\[ x^2 - 11x + 10 = 0 \]

\[ 4x^2 + 13x - 12 = 0 \]

\[ \begin{array}{c|c|c|c|c}
    x & x^2 & -1x & 10 \\
    \hline
    x & x^2 & -1x & 10 \\
    \hline
    1 & 1 & -1 & 10 \\
    -10 & -10 & 10 & 0 \\
\end{array} \]

\[ x = \{1, 10\} \]

\[ \begin{array}{c|c|c|c|c}
    4x & 4x^2 & 16x \\
    \hline
    3 & -3x & -48 \\
\end{array} \]

\[ (4x-3)(x+16)=0 \]

\[ 4x-3=0 \]

\[ 4x=3 \]

\[ x=\frac{3}{4} \]

\[ x+16=0 \]

\[ x=-16 \]

\[ \begin{array}{c}
    x = \{1, \frac{3}{4}, -16, \frac{3}{4}\} \\
    \end{array} \]
Investigation on Sketchpad

Linear Pair Conjecture: If two angles form a linear pair, then the measures of the angles add up to 180 degrees

Vertical Angles Conjecture: If two angles are vertical angles, then
Find the measures of angles a, b and c.
Find the value of $x$ and then the measure of both angles.

$3x + 4x - 75 = 180$
$7x - 75 = 180$
$7x = 255$
$x = 36.429$

$3x = 3(36.429) = 109.287$
$4(36.429) - 75 = 70.716$