2-1 a) yes, I can see myself from various
different angles.
b) Almost any angle possible as long as 90° or less.
   (longer than 90° does not work.)
c) It works because the lines of sight are parallel.
2-2 a) \( m\angle A = m\angle B = m\angle C \)
b) Draw me the other angles at points A!!
c) \( \angle EAC' \) or \( \angle L\angle AEC \)
2-3 a) \( m\angle EBO + m\angle ABC = 90° \)
    \[ +6° + m\angle ABC = 90° \]
    \[-6° \]
    \[ m\angle ABC = 90° - 6° = 14° \]
b) \( m\angle MNP + m\angle PMN = 150° \)
    \[ 62° + m\angle PMN = 150° \]
    \[-62° \]
    \[ m\angle PMN = 150° - 62° = 115° \]
c) \( m\angle AEC + x = 150° \)
    \( m\angle AEC + 23 = 150° \)
    \[-23 \]
    \[ m\angle AEC = 157° \]
    \( m\angle CEB + m\angle AEC = 180° \)
    \( m\angle CEB = 180° - 157° = 23° \)
    \( m\angle CEB = 23° \)
ed) \( \angle AED \parallel \angle CEB \) since both are 23°
2-4 a) \( m\angle AEC + x = 150° \)
    \( m\angle AEC + 54 = 150° \)
    \[-54 \]
    \[ m\angle AEC = 126° \]
    \( m\angle DEB + x = 180° \)
    \( m\angle DEB + 54 = 180° \)
    \[-54 \]
    \[ m\angle DEB = 126° \]
b) Vertical angles are equal
2-5 a) \( m \angle MNP = 180^\circ - 152^\circ = 28^\circ \), supplementary \( \angle \)'s

\[
4x - 5 = 3x + 2 \\
3x + 5 = 3x + 5
\]

\[
x = 70^\circ
\]

\( m \angle FGH = 3x + 2 \)

\[
x = 3(7) + 2 = 21 + 2 = 23^\circ
\]

c) \( 2x - 4 + x + 7 = 90^\circ \), supplementary \( \angle \)'s

\[
3x + 3 = 90^\circ \\
-3 - 3
\]

\[
\frac{3x}{3} = \frac{87}{3}
\]

\[
x = 29^\circ 50'
\]

d) \( x + 28 + x = 180^\circ \), supplementary \( \angle \)'s

\[
2x + 28 = 180^\circ \\
-28 -28
\]

\[
\frac{2x}{2} = 152^\circ
\]

\[
x = 76^\circ 50'
\]

2-6 a) \( m \angle AED = m \angle BEC = x \)

\( m \angle AEC = m \angle BED = 180^\circ - x \)

b) No matter what \( x \) value is selected, no vertical angle is also \( x \). Thus, no vertical angles are always equal.

2-7) Angle Relationships:

Complementary \( \angle \)'s

\[
\text{add to } 90^\circ
\]

Supplementary \( \angle \)'s

\[
\text{add to } 180^\circ
\]

Vertical \( \angle \)'s

\[
\text{not congruent}
\]

When 2 \( \angle \)'s have the same measure, they are congruent.
2-8 a) \(11 \times 3 = 33 \text{ cm}^2\) b) \(3 \times 11 = 33 \text{ sq. units}\)

\[
\begin{array}{c|c|c|c}
3x & -4 & \ \ \\
\hline
33x^2 & +44x & -2 \\
\hline
-6x & +8 & \ \\
\end{array}
\]

\[= \frac{33x^2 - 44x - 6x + 8}{3x^2 - 50x + 8} \text{ sq. units}\]

2-9 a) \(p(\text{quad. w/ 11 side}) = \frac{3}{6} = \frac{1}{2}\) (Trapezoid)

b) \(p(\text{has rotational sym.}) = \frac{2}{6}\) (the Square, parallelogram)

2-10 a) isosceles triangle b) equilateral triangle
c) parallelogram

d) 2-11 a) \[\text{Diagram of shapes}\] b) \[\text{Diagram of shapes}\] c) \[\text{Diagram of shapes}\] d) \[\text{Diagram of shapes}\]

2-12) Answers can vary, have a teammate check yours. Can possible %