Set all cell phones to off or silent - no vibrating.

1. (a) [3 pts] Circle all possible points C that would make $\angle BAC$ an obtuse angle.

2. [3 pts] Circle all possible points C that would make $\angle ACB$ a zero angle.

3. [8 pts] Find the measure of the angle formed by the hands of a working clock at 10:15 AM. Show clear work, but you need not explain.

\[
\text{4 whole slices} \quad \text{plus part of another} \\
\text{(The hour hand has moved } \frac{3}{4} \text{ of the way toward the 11.} \\
\text{)}
\]

\[
\frac{4 \times 30^\circ}{3} + \frac{3}{4} \text{ of } 30^\circ = 142.5^\circ
\]

3. [8 pts] What is the largest 3-digit number of diagonals a polygon could have? Justify your answer with an explanation or computation.

\[
\text{(Guess and check).} \\
\frac{43 \times 46}{2} = 989 \text{ diagonals, for 46 sides.}
\]

\[
\text{(One more side makes the number too large; over 1,000 diagonals.)}
\]