

8-53. See below.

a. The interior and exterior angles must be supplementary. Therefore, $180^\circ - 20^\circ = 160^\circ$.

b. Students can either use $360^\circ \div 20^\circ = 18$ sides or solve the equation $\frac{180(n-2)}{n} = 160^\circ$ to find $n = 18$.

8-55. Since the diagonals of a parallelogram bisect each other, they must intersect at the midpoint of \overline{BD} . Thus, they intersect at (6, 21).

8-57. ≈ 103.8 meters

8-60. See below.

a. 60°

b. 82°

c. 14°

d. 117°