

Name \_\_\_\_\_

Date \_\_\_\_\_ Class \_\_\_\_\_

Sum of Interior Angles of a Triangle

Mr. Lynch

**For each of the following, draw a diagram and answer the questions that follow. Figures are not drawn to scale.**

1) In triangle ABC,  $\angle A = 3x - 10$ ,  $\angle B = 6x - 4$ , and  $\angle C = x + 14$ . Find  $x$  and all angles.

2) In triangle DEF,  $\angle D = 2x - 12$ ,  $\angle E = 3x + 8$ , and  $\angle F = 5x - 6$ . Find  $x$  and all angles.

3) In triangle RST,  $\angle R = 3x - 7$ ,  $\angle S = 4x - 6$ , and  $\angle T = x - 9$ . Find  $x$  and all angles.

4) In triangle XYZ,  $\angle X = 2y - 17$ ,  $\angle Y = 2y + 4$ , and  $\angle Z = 6y - 7$ . Find  $y$  and all angles.

5) In triangle ABC,  $\angle A = x - 4$ ,  $\angle B = x - 6$ , and  $\angle C = 2x + 8$ . Find  $x$  and all angles.