

Name: \_\_\_\_\_  
Date: \_\_\_\_\_  
Class: \_\_\_\_\_

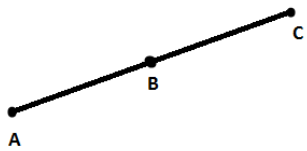
Geometry  
Unit 2  
HW 2-4

1) Factor:  $x^2 - 10x + 16$

2) Factor:  $2x^2 - 16x - 18$

3) Solve:  $6x^2 - 3 = 7x$

4)



B is the midpoint of  $\overline{AC}$

If  $AB = x^2 + 15$  and  $BC = 2x^2 + 3x + 5$  find and explain AC

5)  $\angle SML$  has ray  $MT$  splitting the angle into two parts.  $m\angle SML = 3x^2 + 2x + 16$ ,  $m\angle SMT = x^2 + 5x + 5$ , and  $m\angle TML = x^2 + 3x + 3$ . Find the value of  $x$ .

6) How much longer (to the nearest tenth) is segment  $MT$  with endpoints  $(6, -7)$  and  $(-4, -3)$  than segment  $UR$  with endpoints  $(10, 4)$  and  $(7, -3)$ ?

7) If segment  $RY$  has point  $H$  on it and the following is true, what would be the ratio that represents  $RH:YH$ ?  $RH = x + 2$ ,  $HY = 3x + 1$ ,  $RY = 6x - 3$ .