Name: _____

2.4 – BEGINNING PROOFS

Past due on: _____ Period: _____
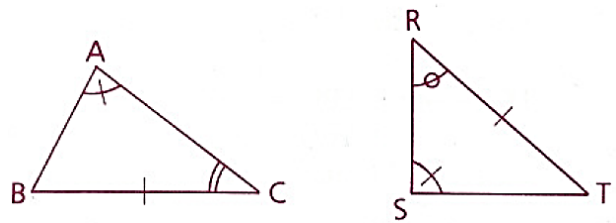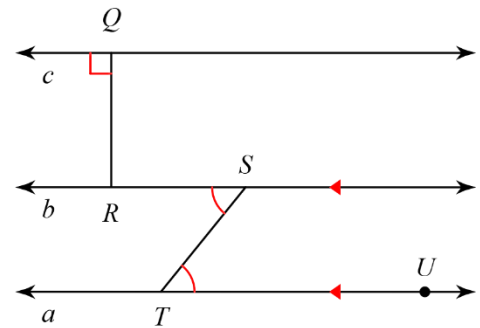
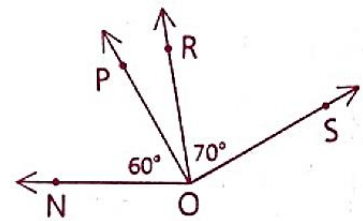1. According to the diagram, which segments are congruent? Which angles are congruent?

2. According to the diagram, which of the following statements are accurate? Select ALL that apply.

   a. $\overline{QR} \perp c$

   b. $\angle RST \cong \angle STU$

   c. $\angle QRS$ is a right angle

   d. $\overline{QR} \cong \overline{SR}$

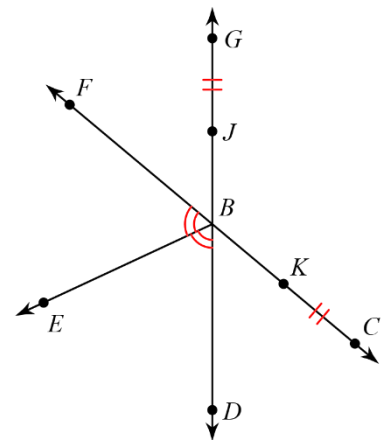   e. Line b is also a straight angle

3. Is it possible for both $\angle NOR$ and $\angle POS$ to be right angles? Explain your reasoning.
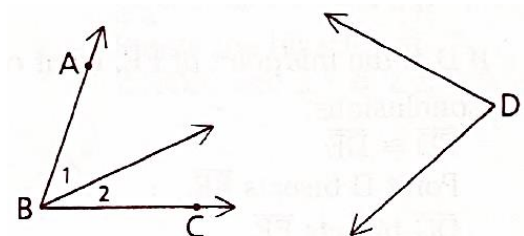
4. According to the diagram, which of the following statements are accurate? Select ALL that apply.

   a. $\overline{GJ} \cong \overline{KC}$

   b. $\angle FBG \cong \angle DBC$

   c. $\angle JBK$ & $\angle DBF$ are vertical angles

   d. $\overline{BE} \cong \overline{BD}$

   e. $\angle KBG$ & $\angle JBF$ form a linear pair

   f. $\angle DBF$ is a straight angle
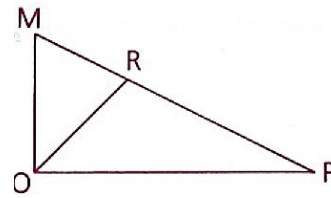
5. Given: $m\angle 1 = x + 7$
            $m\angle 2 = 2x - 3$
            $m\angle ABC = x^2$
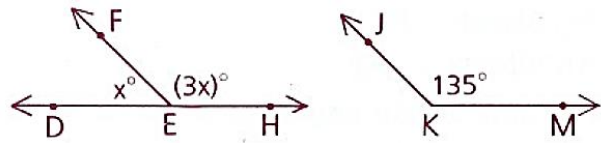 $m\angle D = 5x - 4$

   Show that $\angle ABC \cong \angle D$.

6.   Given: $m\angle MOR = 3x + 7$
              $m\angle ROP = 4x - 1$
              $\angle MOP$ is a right angle

      Which angle is larger: $\angle MOR$ or $\angle ROP$?
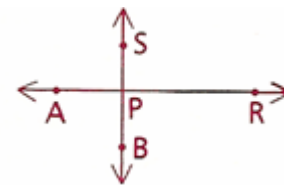
      Show work to support your reasoning.

7.   Given: Diagram as shown.
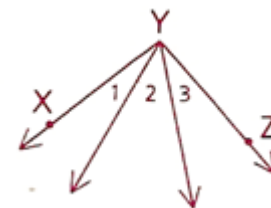
      Show that $\angle FEH \cong \angle JKM$

Two-Column Proof Problems:

8.   Given: Diagram as shown

      Prove: $\angle APR \cong \angle BPS$

STATEMENTS	REASONS

9.   Given: $m\angle 1 = 20$
                $m\angle 2 = 40$
                $m\angle 3 = 30$

      Prove: $\angle XYZ$ is a right angle

STATEMENTS	REASONS