**3.12 Unit 3 Test Review**



**Directions: Solve for x. Then find the missing angle.**

1) 2)

 x = \_\_\_\_\_\_\_\_\_\_\_ x = \_\_\_\_\_\_\_\_

 m$∠$TUA = \_\_\_\_\_\_ m$∠$A = \_\_\_\_\_

**Directions: Classify the triangle by its angles. Direction: Classify the triangle by its sides.**

3) m$∠$A = (4x + 10)ᴼ 4)

 m$∠$B = (–3x + 60)ᴼ

 m$∠$C = (x + 74)ᴼ

**Directions: Determine if the triangles are congruent. If they are, justify your answer & write a triangle congruence statement.**



5) 6) 7)

**Directions: Determine the missing information needed to prove the triangles are congruent with the given theorem or postulate.**



8) ASA 9) SSS 10) AAS

11) Given that *∆CDE* $≅$ *∆HIJ,* CE = 5x, 12) What is the length of the longest side?

 and HJ = 2x + 15, find x and CE.

13) What is the measure of the vertex angle in an 14) In an isosceles triangle, a vertex angle measures 3x

 isosceles triangle if a base angle measures 45°? and a base angle measures x. What is the measure

 of each of the angles in the isosceles triangle?

**Directions: Determine if the following side lengths can be used to make a triangle. If they are, write the sides in order from least to greatest and then the angles in order from least to greatest.**

15) AB = 5, BC = 8, AC = 10 16) MN = 3, LN = 2, ML = 5

17) Given: $∠1≅$ $∠2$ 18) Copy the segment and angle onto another piece

 $∠3≅$ $∠4$ of paper. Then, bisect the segment and angle.

 Prove: *∆JKL* is isosceles





**Directions: Use the triangle midsegment theorem and the figure below to answer 19 – 22.**



19) ST \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 20) QR \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 21) PU \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 22) m$∠$SUP \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_