Review for Chapter 4 Test

Chapter 4 Vocabulary terms:

vertex angle  base angles  hypotenuse  median
altitude  perpendicular bisector  CPCTC
**(also study vocab. from chapters 1 – 3)**

Suppose you know that $\Delta EVY \cong \Delta TAZ$.

1) Name three pairs of congruent sides.

2) Name three pairs of congruent angles.

3) Give another congruence statement for these two triangles (fill in the blanks below).

$\Delta$_____ $\cong \Delta$ _____

4) If $\Delta ABC \cong \Delta XYZ$, $m\angle A = 80°$, and $m\angle C = 50°$, name four congruent angles.

The two triangles shown are congruent. Complete the following using the given diagram.

5) $\Delta MEI \cong \Delta$_____

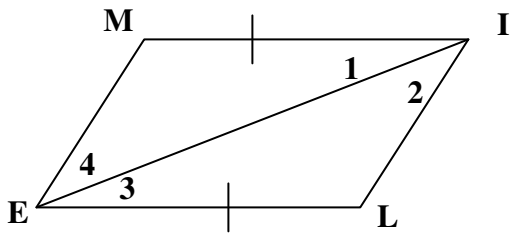
6) $\overline{ME} \cong$ _____

7) If $\angle 1 \cong$ _____, then $\overline{MI} \parallel$ _____

because _____

8) If $\angle 2 \cong$ _____ because _____, then _____ $\parallel$

_____ because _____

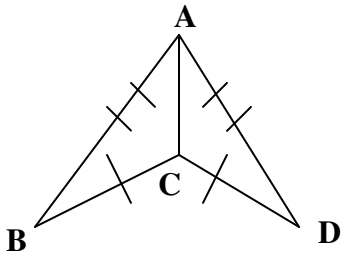


Plot the given points on graph paper. Draw $\Delta ABC$ and DE. Find <u>two</u> locations of point F such that $\Delta ABC \cong \Delta DEF$.

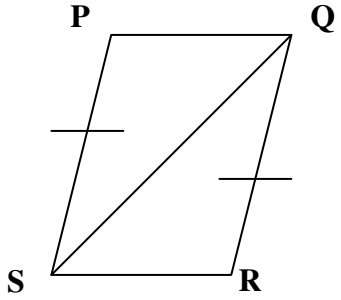
9) A (-1, 0)  B (-5, 4)  C (-6, 1)  D (1, 0)  E (5, 4)

Decide whether you can deduce by the SSS, SAS, or ASA, AAS, or HL postulate or theorem that another triangle is congruent to $\Delta ABC$. **If so, write the congruence and name the postulate used**. If not, write *no congruence can be deduced.*

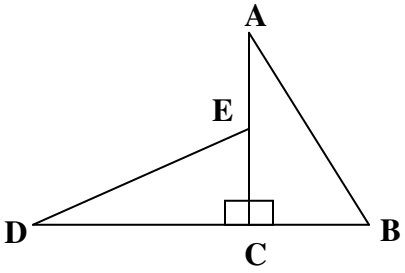
10)



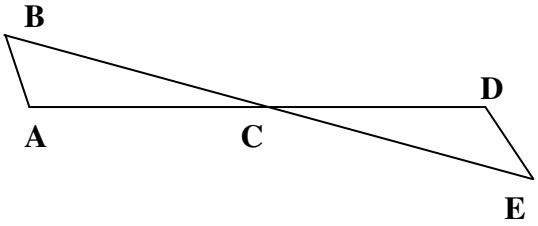

11) segment PS || segment QR and segment PQ || segment SR



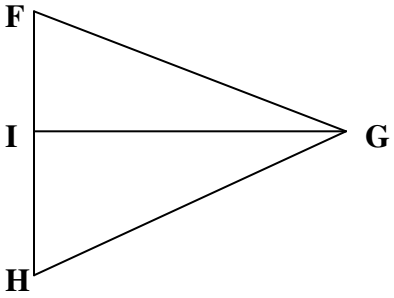
12) m< A = m< E and CB = EC



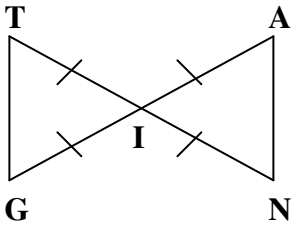

13) C is the midpoint of segment AD and segment BE



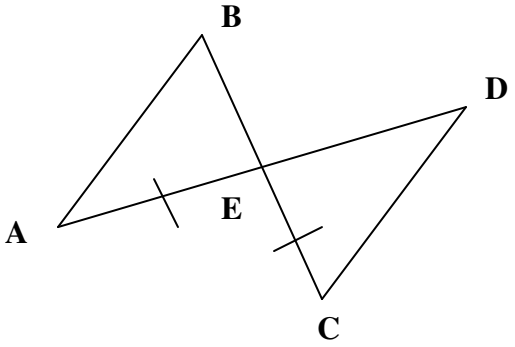

14) segment GI ⊥ segment FH
segment GI is a bisector of < FGH



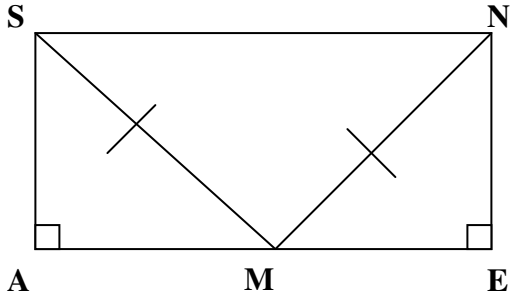

15)



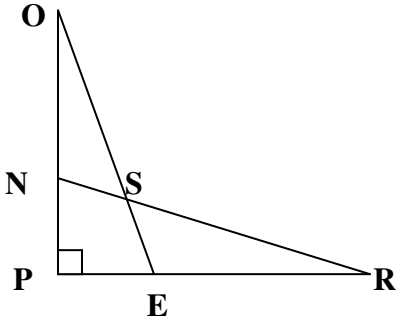

16) segment AB || segment CD



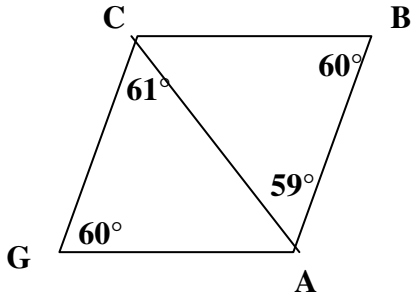

17) M is a midpoint of segment AE




18) m< O = m< R and NR = EO

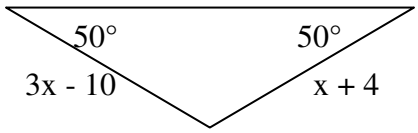



19)



Find the value for x with the given diagrams

20)

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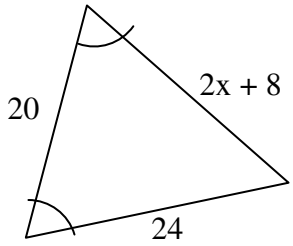
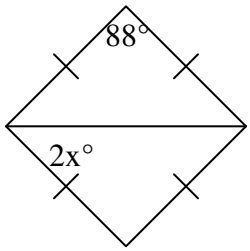
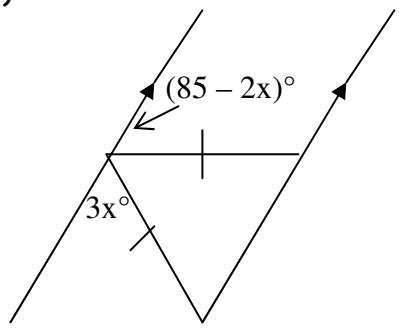



22)




23)




Solve for x and y.

24) In equiangular $\Delta ABC$, $AB = 4x - y$, $BC = 2x + 3y$, and $AC = 7$

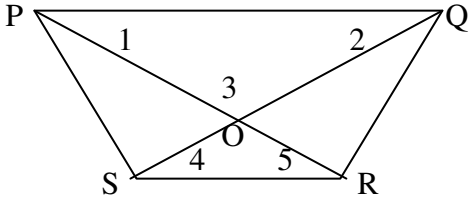
25) In equilateral $\Delta DEF$, $m\angle D = x + y$ and $m\angle E = 2x - y$

Solve for x.

26) In $\Delta JKL$, $JK \cong KL$, $m\angle J = x^2$, $m\angle K = x + 1$, and $m\angle L = 3x - 2$

27) Given that PO = QO, RO = SO and $m\angle 1 = 50°$ solve for the following

| | |
|---|---|
| $m\angle 2 =$ | $m\angle 3 =$ |
| $m\angle 4 =$ | $m\angle 5 =$ |




Also look over the 4-7 assignments for practice with those problems

Answer Key:

1) $\overline{EV} \cong \overline{TA}$ $\overline{VY} \cong \overline{AZ}$ $\overline{YE} \cong \overline{ZT}$
2) $\angle E \cong \angle T$ $\angle V \cong \angle A$ $\angle Y \cong \angle Z$
3) $\Delta VYE \cong \Delta AZT$
4) $m\angle B = m\angle C = m\angle Y = m\angle Z = 50°$
5) $\Delta LIE$
6) segment LI
7) $\angle 3$; segment EL; alt. int. $\angle$'s are congruent
8) $\angle 4$; CPCTC; segment ME || segment IL; alt. int. $\angle$'s are congruent
9) (6, 1) (2, 5)
10) SSS; $\Delta ABC \cong \Delta ADC$
11) SAS, ASA, or AAS; $\Delta PQS \cong \Delta RSQ$
12) none
13) SAS; $\Delta ABC \cong \Delta DEC$
14) ASA; $\Delta FIG \cong \Delta HIG$
15) SAS; $\Delta TIG \cong \Delta AIN$
16) ASA or AAS; $\Delta ABE \cong \Delta DCE$
17) HL; $\Delta SAM \cong \Delta NEM$
18) AAS; $\Delta POE \cong \Delta PRN$
19) ASA; $\Delta ABC \cong \Delta AGC$
20) $x = 7$
21) $x = 8$
22) $x = 23$
23) $x = 17$
24) $x = 2$; $y = 1$
25) $x = 40$; $y = 20$
26) x = 1 and 2
27) $m\angle 2 = m\angle 4 = m\angle 5 = 50°$; $m\angle 7 = 80°$