Geometry Semester 1 Final Review Name _____

Bring this packet to class; some days you will be given time to work on it.

Know the definitions for the following terms: (You're not required to define these, but insure you know them)

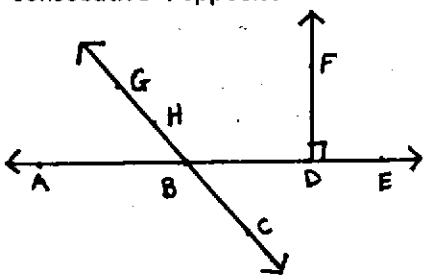
parallel:
perpendicular:
skew:
incenter:
centroid:
obtuse:
perp. bisector:

complementary:
supplementary:
congruent:
circumcenter:
median:
acute:
trapezoid:

scalene:
isosceles
equi-lateral/angular:
quadrilateral:
rhombus:
parallelogram:
altitude:

Be able to identify the following angles:
vertical / corresponding / alternate interior /alternate exterior / linear pair / consecutive /opposite

1. Use the diagram to name the following with correct symbolism



a. an acute angle

b. a segment perpendicular to AE

c. a line

d. A ray with initial point of B

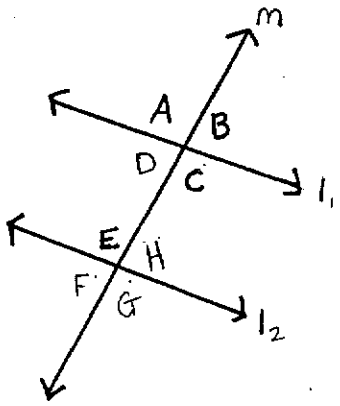
e. a pair of vertivcal angles.

2. Find the length between (1,2) (-3,4).

3. Find slope of line going through (-1,2) (-3,-4).

4. Find the equation of the line perpendicular to your answer in #3 and through (3,-1).

5. Name the type of angle and find the indicated measure; $l_1 \parallel l_2$
$m\angle H = 75°$



a. <H and < B are _____
b. m<B = _____

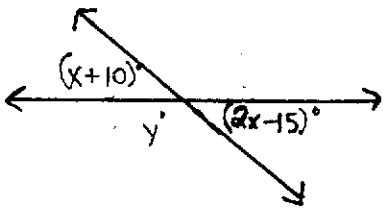
c. <H and < G are _____
d. m<G = _____

e. <H and < F are _____
f. m<F = _____

g. <H and < C are _____
h. m<C = _____

i. <C and < E are _____
j. m<C = _____

6. Find value of x and y in each diagram



x = _____

y = _____

Using the given sentence write each of the following: *If there is pizza, then I will not miss the meeting.*

Inclusion:

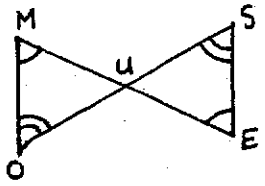
Converse:

Contrapositive:

Negation(Inverse):

Hypothesis:

8. Are the triangles congruent? Why or why not? If so, name them

a. 

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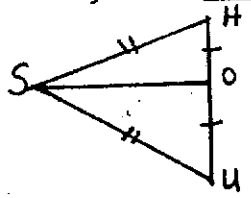
b. 

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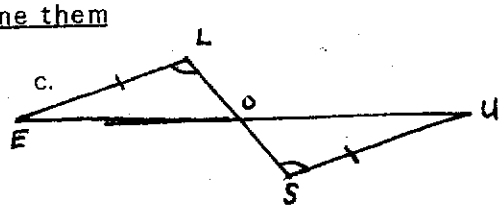
c. 

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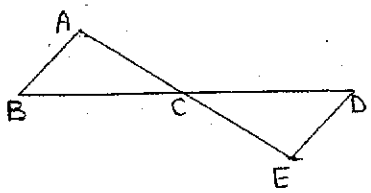
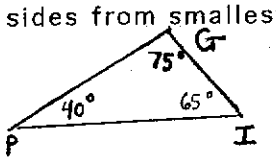
9. Use the diagram below and the given information to decide if the triangles are congruent. Give a reason for your answer.



a. C is the midpoint of $\overline{BD}$
C is the midpoint of $\overline{AE}$

b. $m\angle A = m\angle E = 90°$
C is the midpoint of $\overline{BD}$
$\overline{AB} \cong \overline{DE}$

10. Order the sides from smallest to largest



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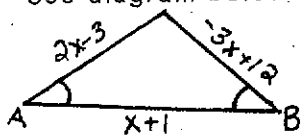
11. Use diagram below to find AB



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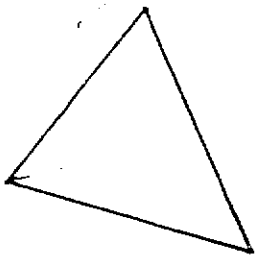
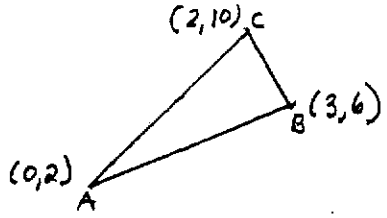
12. a. Construct circumcenter.



b. Construct inscribed circle.

a. Find the midpoint of $\overline{AB}$.

b. Find the equation of the median of $\overline{BC}$.



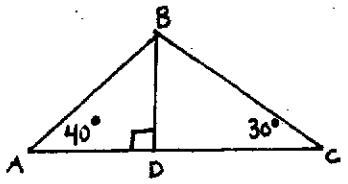
14. Write the equation of line parallel to y=-2x+3 and going through (2,1).

15. Draw one diagram fitting all descriptions:
   a. $\overrightarrow{AB}$ and $\overrightarrow{AC}$ are opposite rays
   b. $\overline{AB} \cong \overline{AD} \cong \overline{AE}$
   c. E is in the interior of <DAB

16. If $\Delta ABC = \Delta DEF$ with AB = 8 and EF = 3, write an inequality for the possible lengths of AC

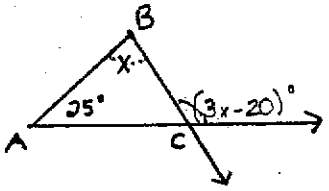
17. $\overline{BD}$ is an altitude. Find:

   a. $m<ABC$ b. $m<CDB$ c. $m<ABD$

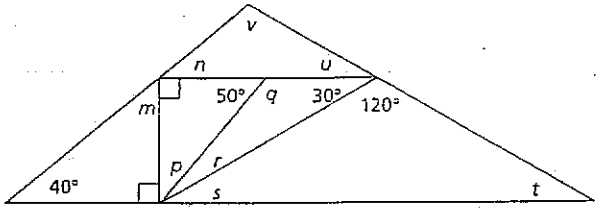


18. Use diagram to right

   $m<B$ = _____

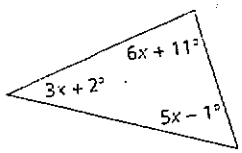


19. Find the measure of all labeled angles.

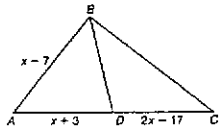


20. Solve for X

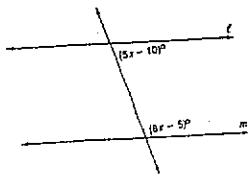
a.



b. Find AB if $\overline{BD}$ is a median of ΔABC.



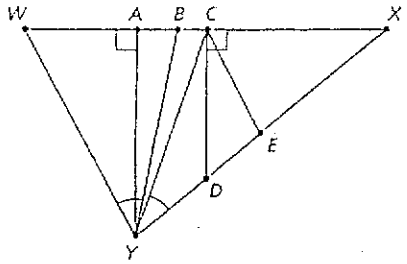
c. find the value of x so that $\ell \parallel m$.



21. Name the special segment of ΔWXY.

Given: $\overline{WC} \cong \overline{CX}$, $\overline{YE} \cong \overline{EX}$, $\angle WYB \cong \angle BYX$

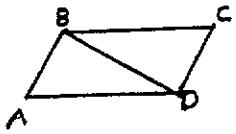
(a) A midsegment
(b) A perpendicular bisector
(c) An angle bisector
(d) An altitude
(e) A median



Write a two-column proof

Given: $\overline{AB} = \overline{CD}$, $\overline{AB} \parallel \overline{CD}$

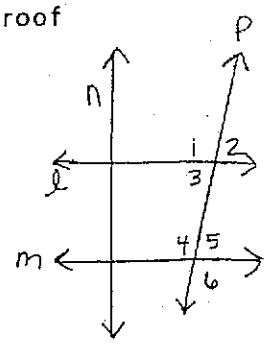
Prove: $\triangle ABD \cong \triangle CDB$



23. Write a two-column proof

Given: $l \perp n$, $m \perp n$

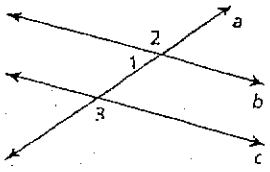
Prove: $\angle 3 + \angle 6 = 180°$



24. Write a two-column proof

Given: $m\angle 1 = 50°$, $m\angle 3 = 130°$

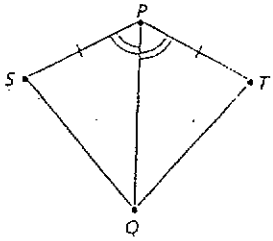
Prove: $b \parallel c$



25. Write a two-column proof

Given: $\overline{PQ}$ bisects $\angle SPT$, $\overline{SP} \cong \overline{PT}$

Prove: SQ ≅ QT

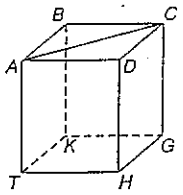


26. Use the diagram at right

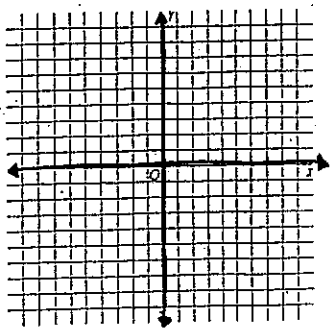
a. Name 2 segments parallel to $\overline{DH}$

b. Name 2 segments perpendicular to $\overline{BA}$

c. Name a segment skew to $\overline{TH}$



27. Find the distance from (-3, 9) to y = 3x - 2



28. Complete each statement with a < or >.

a. $\angle 11$ ___ $\angle 8$

b. $\angle 5$ ___ $\angle 9$