# Geometry Fall 2013   Final Exam Review

You will be expected to know all the vocabulary, postulates, properties, and theorems that we've covered this semester and how to use them. The following are just some example problems to help you prepare for the final exam. You should look through all the quizzes, tests, and notes from the semester to help you prepare.

Chapter 1 and 2 Use the figure below for 1 to 8.
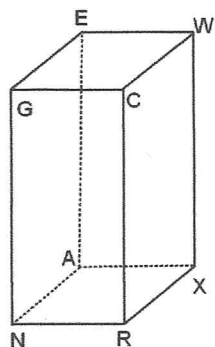
1. Name the intersection of planes WEG and CRX
2. Name the intersection of $\overline{XA}$ & $\overline{NA}$
3. Name a point that is coplanar with W, X, and E
4. Name a plane that is parallel to GNA
5. Name a segment that is parallel to $\overline{CR}$
6. Name a segment that is skew to $\overline{WE}$
7. Point C is formed by the intersection of _____ and _____
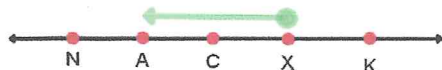8. $\overline{GC}$ is formed by the intersection of _____ and _____
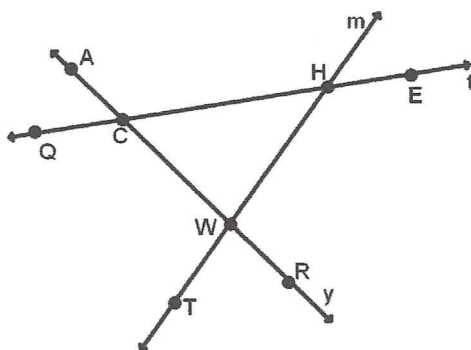
Use the figure at the right for 9 to 12.

9. Name line $\overleftrightarrow{HW}$ two other ways.
10. Name a point that is collinear with C and R.
11. Name the intersection of line t and $\overleftrightarrow{WR}$
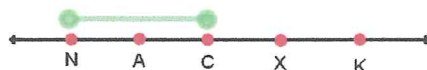12. Name a ray that is opposite of $\overrightarrow{HE}$

Fill in the blanks.

13. $\overline{QC} +$ _____ $= \overline{QE}$ 14. $\overline{CW} + \overline{WR} =$ _____
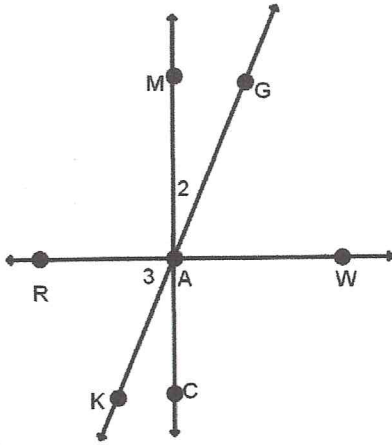
14. Name the highlighted ray.   15. Name the highlighted segment.

1

Use the figure below for 16 to 22.
Given: $\overline{MC} \perp \overline{RW}$

16. Name two complementary angles.
17. Name an angle that is supplementary to $\angle GAW$
18. Name $\angle 2$ another way.
19. Name an angle that is vertical to $\angle 3$
20. Name an angle that is adjacent to $\angle KAC$
Fill in the blank.
21. $\angle RAM + \angle\underline{} = \angle RAG$
22. $\angle CAK + \angle KAM = \angle\underline{}$

23. Use this conditional: If a figure is a square, then it has four right angles.
a) Is this conditional true? If no, give a counterexample
b) Write the converse.
c) Is the converse true? If no, give a counterexample

24. Write the conditional that the Venn Diagram represents.
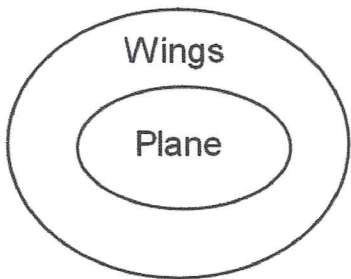
25. Use this conditional: If an angle has a measure of 90°, then it's a right angle.
a) Write the converse.
b) Write the original conditional and its converse as a biconditional.

26. Use this biconditional: A polygon is a hexagon if and only if it's a polygon with six sides.
a) Write the two conditionals that make up this biconditional.
b) Is this biconditional true? Give a reason.

27. Use the given figure and fill in the reasons.

X+3　　　　3X + 7
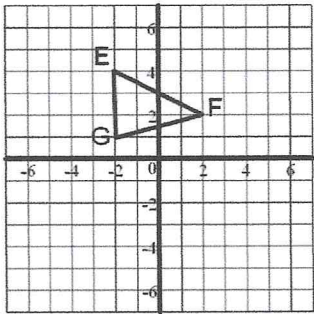
A　　D　　　　　Q
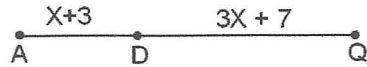
Given: $AQ = 50$

Prove: $x = 10$

Statement	Reason
1. $AQ = 50$	1. Given
2. $AD + DQ = AQ$	2.
3. $x + 3 + 3x + 7 = 50$	3.
4. $4x + 10 = 50$	4.
5. $4x + 10 - 10 = 50 - 10$	5.
6. $4x = 40$	6.
7. $\frac{4x}{4} = \frac{40}{4}$	7.
8. $x = 10$	8.

Chapter 9

1. Given $\triangle EFG$ shown below.
Draw the image and label the vertices after the following translation:
$(x,y) \rightarrow (x+5, y-6)$

2. Write a rule for the translation shown below.
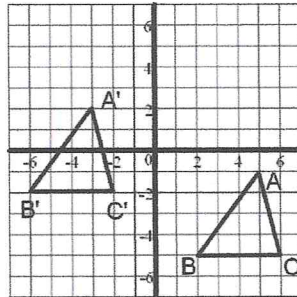
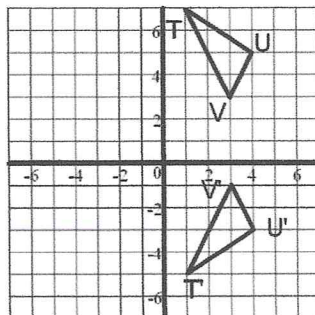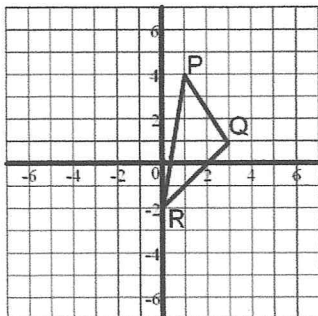3. Describe the translation shown: $P(-2,8) \rightarrow P'(5,3)$

4. Use this point: $Q(2,6)$. Find the coordinates of the image after reflecting Q over the following lines:
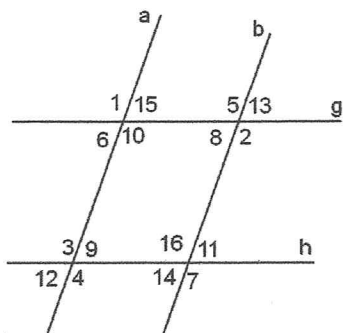a) x-axis　　b) y-axis　　c) $x = 3$　　d) $y = -1$

5. Given $\triangle PQR$ shown below.
Draw the image and label the vertices after reflecting over the line $x = -2$

6. Write the equation for the LOS and draw it on the graph.

3

Use this figure for 1 to 4.

1. Given $a\|b$ and $g\|h$. For each pair of angles answer the following:
• State their name, if there is one.
• State their relationship ($\cong$ or suppl)
a) $\angle 1 \& \angle 10$ b) $\angle 13 \& \angle 7$ c) $\angle 15 \& \angle 14$ d) $\angle 6 \& \angle 8$
e) $\angle 2 \& \angle 16$ f) $\angle 5 \& \angle 9$ g) $\angle 15 \& \angle 5$ h) $\angle 3 \& \angle 7$

2. Use the given information to determine which lines are parallel, if any.
a) $\angle 12 \cong \angle 11$ b) $\angle 15$ suppl to $\angle 4$ c) $\angle 8 \cong \angle 9$
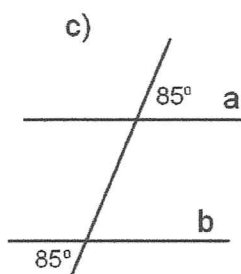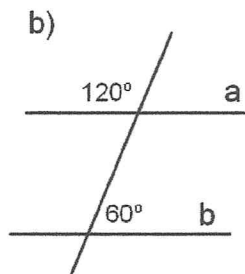
3. Write a proof.
Given: $a\|b$ and $g\|h$
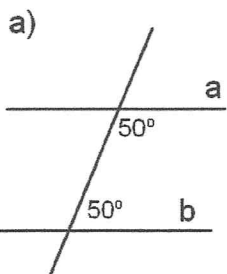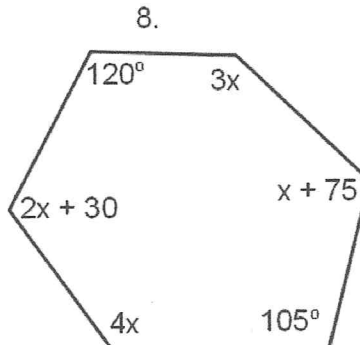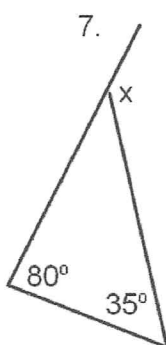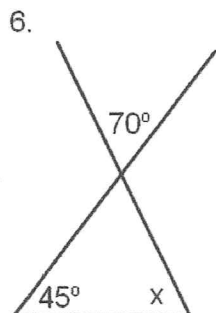Prove: $\angle 5$ & $\angle 12$ are supplementary

4. Write a proof.
Given: $a\|b$ and $g\|h$
Prove: $\angle 6 \cong \angle 11$

5. Are lines a and b parallel? If yes, state a reason.
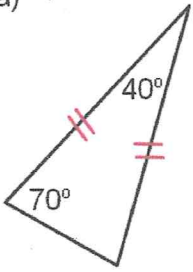
a)

b)

c)

For 6 to 8. Find the value of x in each.

6.

7.

8.

6
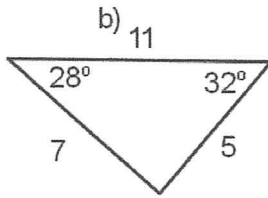
9. Find the number of sides of a polygon if the sum of the interior angles is $3060°$.

10. Find the measure of one interior angle and one exterior angle of a regular decagon.

11. Find the number of sides of a regular polygon if the measure of one interior angle is $150°$.

12. Name each triangle by its angles and then by its sides.

a)

$40°$

$70°$

b) 11

$28°$

$32°$

7

5

c)

$60°$

4

4

$60°$

4