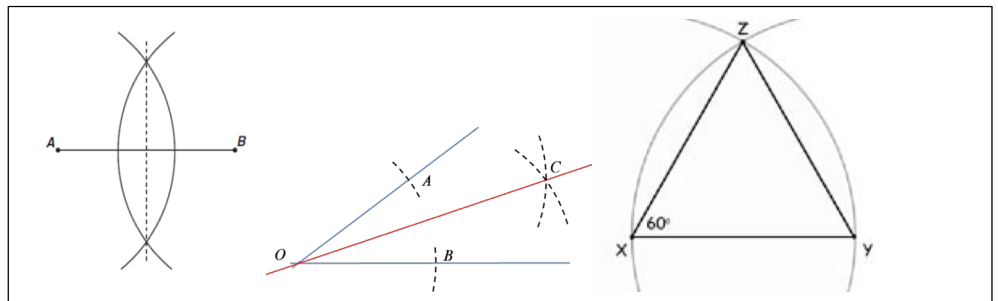
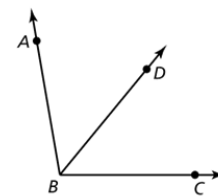


Final Exam Fall 2016 Review

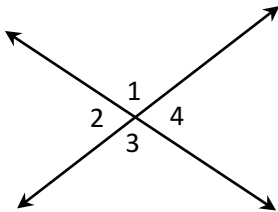
1. Name these constructions:



2. \overrightarrow{BD} bisects $\angle ABC$. If $m\angle ABD = 65^\circ$, what is the measure of $\angle ABC$?



3. In the diagram below, $m\angle 1 = (4x + 5)^\circ$ and $m\angle 3 = (2x + 15)^\circ$. Solve for x .



4. Name these pairs of angles based on the drawing below: $\angle 3$ and $\angle 1$ _____

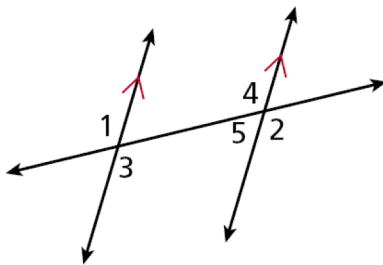
$\angle 3$ and $\angle 5$ _____

$\angle 4$ and $\angle 5$ _____

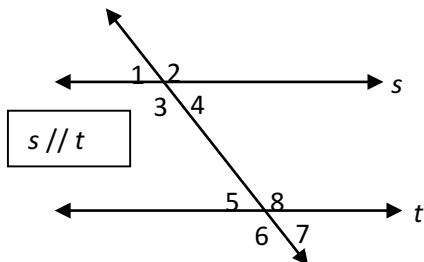
$\angle 3$ and $\angle 4$ _____

$\angle 1$ and $\angle 2$ _____

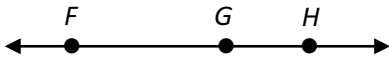
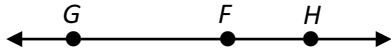
$\angle 1$ and $\angle 4$ _____



5. Based on the drawing below, if $m\angle 2 = 121^\circ$, what is $m\angle 6$? what is $m\angle 5$?



6. Recognize and name opposite rays



7. On a gridded map, position A is at $(10, -5)$ and position B is at $(2, 10)$. Find AB .

8. Given the lengths of two sides of a triangle, find the range of possible lengths for the third side.

13 ft and 19 ft

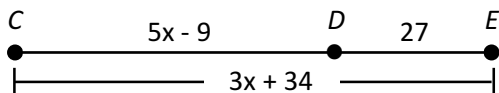
45 cm and 20 cm

25 in and 32 in

17 in and 12 in

9. Solve and justify the equation: $3(x - 7) - 14 = 2(3x + 8)$

10. Use the figure below to solve for x .



11. What is the next term in the sequence? $\frac{1}{3}, \frac{1}{6}, \frac{1}{9}, \dots$

12. Consider the sequence below: 9, 7, 5, 3, ...

a) Find the next term in the sequence.

13. What is the contrapositive of the statement below?

If an angle is obtuse, then it measures between 90° and 180° .

Obj. 8 – Deductive Reasoning

14. The statements below are out of order.

W: If mot, then det.

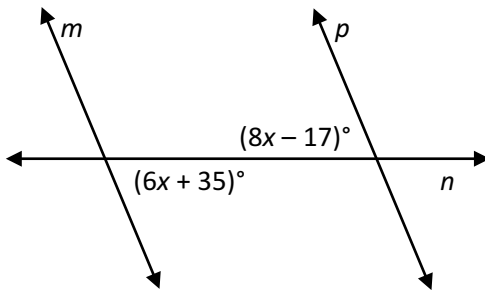
X: If blitz, then kerd.

Y: If toc, then blitz.

Z: If kerd, then mot.

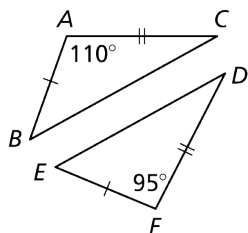
Put the statements in a logical order.

15. Line n intersects line m and p , forming the angles shown in the diagram below. Which value of x would prove $m \parallel p$?

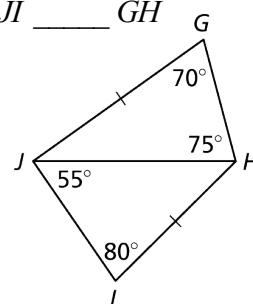


Copy and complete the statement with $<$, $>$, or $=$. Explain your reasoning.

16. BC _____ DE



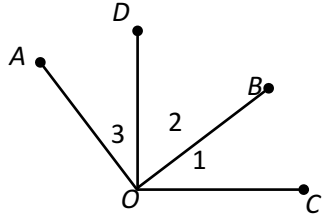
17. JI _____ GH



18. Complete the proof:

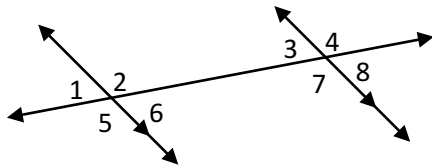
Given: $\angle AOB$ and $\angle DOC$ are right angles

Prove: $\angle 3 \cong \angle 1$

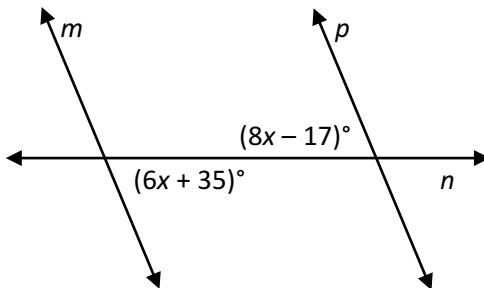


Statements	Reasons
1. $\angle AOB$ & $\angle DOC$ rt. \angle s	1.
2. $m\angle AOB=90^\circ$, $m\angle DOC=90^\circ$	2. Def. right \angle s
3. $m\angle 3+m\angle 2=m\angle AOB$	3. Angle Add. Post.
4. $m\angle 2+m\angle 1=m\angle DOC$	4.
5. $m\angle 3+m\angle 2=90^\circ$, $m\angle 2+m\angle 1=90^\circ$	5.
6. $m\angle 3+m\angle 2=m\angle 2+m\angle 1$	6. Subst. prop. =
7. $m\angle 3=m\angle 1$	7.
8.	8. Def. $\cong \angle$ s

19. In the accompanying figure, what is one pair of alternate interior angles?



20. Line n intersects line m and p , forming the angles shown in the diagram below. Which value of x would prove $m \parallel p$?



21. If one point is at $(0, b)$ and another point is at $(3b, 0)$, what is the slope of the line between them?

22. Two points whose coordinates are $(4, 17)$ and $(2, a)$ determine a line whose slope is 6. Find the value of a .

23. What is the slope of the line whose equation is $5x - 4y = 10$?

24. Which is an equation of the line that passes through the point $(7, -3)$ and has a slope of -2 ?

25. Write the equation of a line that is parallel to the line whose equation is $y = \frac{2}{3}x + 1$ and goes through the point $(3, 1)$.

26. Which is an equation of a line perpendicular to the line whose equation is $y = -3x + 7$?

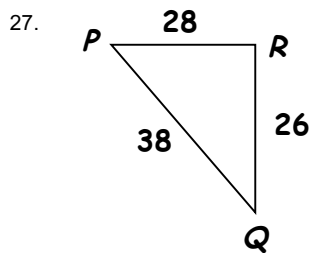
A) $y = 3x - 1$

B) $y = -3x - 1$

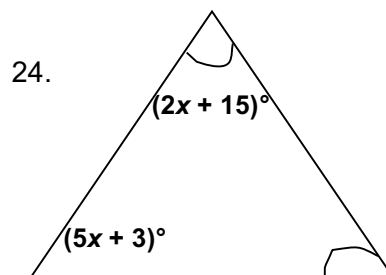
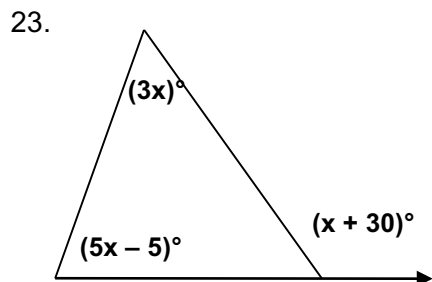
C) $y = \frac{1}{3}x - 1$

D) $y = -\frac{1}{3}x - 1$

List the angles in order from smallest to largest.



Find the values of the variables.



28. Write the following definition as a biconditional:

A triangle is a polygon with three sides.

Define each and draw an example:

29. Complementary angles

30. Right angle

31. Straight Angle

32. Linear Pair

33. Supplemental angles

Is it possible for a triangle to have sides with the given lengths? (Yes or No)

_____ 32. 7, 9, 17

_____ 33. 3, 5, 7

_____ 34. 13, 14, 29

_____ 35. 1.5, 5, 6.75