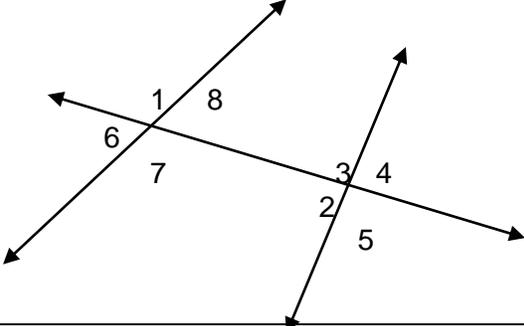
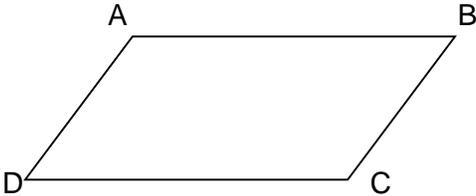
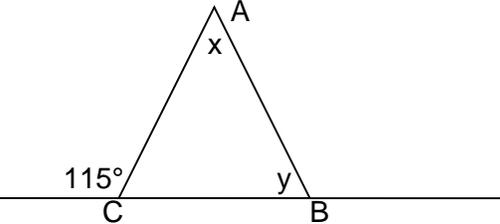
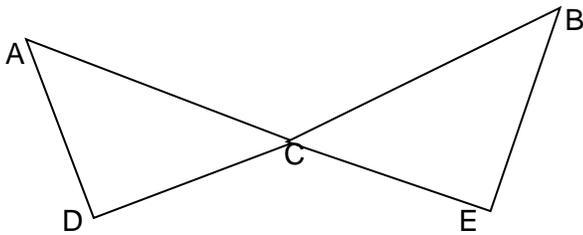


<p>1. Draw a regular octagon. On it, draw all lines of symmetry.</p>	<p>2. Draw line segment \overline{AB}. C is the midpoint of \overline{AB}. If $AC = 8$, find AB and BC.</p>
<p>3. The relationship is: "is the same age as" Is this relationship (a) reflexive (b) symmetric (c) transitive? Give an example or counterexample for each of these.</p>	<p>4. Given the points $A(-2, 3)$ and $B(6, -5)$ find (a) the midpoint of \overline{AB} (b) the length of \overline{AB} (c) the slope of \overline{AB}</p>
<p>5. For the line $y = 3x + 2$, find the equation of the line passing through the point $(3, 2)$ and (a) parallel and (b) perpendicular to the given line.</p>	<p>6. Define: (a) supplementary angles (b) complementary angles.</p>
<p>7. Draw (a) \overline{AB} (segment AB) (b) \overrightarrow{AB} (ray AB) (c) \overleftrightarrow{AB} (line AB)</p>	<p>8. Continue the pattern for the next 2 numbers: (a) 1, 4, 9, 16, 25, (b) 1, 3, 6, 10, 15,</p>
<p>9. B is in the interior of $\angle AOC$. If $\angle AOC = 70^\circ$ and $\angle AOB = 54^\circ$, find $\angle BOC$</p>	<p>10. Let B be between C and A. Use the segment addition postulate to solve for x. $BC = 4x + 3$, $AB = 2x - 1$, $AC = 62$. Find BC.</p>
<p>11. Find the sum of the measures of the interior angles of a convex octagon.</p>	<p>12. Define what is meant by congruent.</p>
<p>13.</p> 	<p>What type of angles are: (a) $\angle 1$ and $\angle 7$ (b) $\angle 1$ and $\angle 6$ (c) $\angle 1$ and $\angle 5$ (d) $\angle 3$ and $\angle 7$ (e) $\angle 2$ and $\angle 7$ (e) $\angle 1$ and $\angle 3$</p>
<p>14. (a) The measure of each exterior angle of a regular hexagon is: (b) The measure of each interior angle of a regular hexagon is:</p>	<p>15. If $\triangle ABC$ is congruent to $\triangle DEF$ then (a) $BC \cong ?$ and (b) $\angle A \cong ?$</p>
<p>16. Define: (a) an equiangular polygon (b) an equilateral polygon (c) a regular polygon</p>	<p>17. The angles of a hexagon differ from each other by 5° when put in ascending order. What are the angles?</p>
<p>18. For parallelogram $ABCD$, if $m\angle ABC = 85^\circ$, then:</p>  <p>(a) $m\angle BCD = ?$ (b) $m\angle CDA = ?$</p>	<p>19. $AC \cong AB$. Find the measure of x and y.</p> 

20. A trapezoid has parallel sides that measure 10 cm and 14 cm. What is the length of the midsegment?

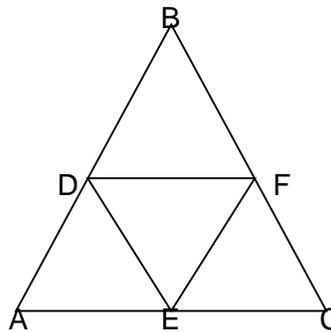
21. Given $\angle B \cong \angle E$ and $BC \cong EF$. What other piece of information is needed to show $\triangle ABC \cong \triangle DEF$ by AAS Congruence Postulate?

22. $\angle A \cong \angle B$ and $AC \cong BC$.



$\triangle ADC \cong \triangle BEC$ by what postulate?

23.



- (a) D is the midpoint of AB, F is the midpoint of BC and E is the midpoint of AC. If $DE = 6$, find BC.
- (b) If instead, $BC = 2x + 1$ and $DE = \frac{3}{2}x - 2$. Solve for x

24. Rewrite the statement in bi-conditional form: Every equilateral triangle has 3 congruent angles.

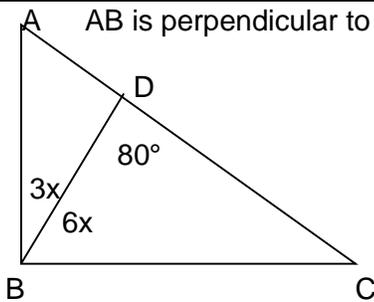
25. Define (a) an acute triangle, (b) an obtuse triangle, (c) an isosceles triangle, (d) a scalene triangle

26. Solve: $3d + 5t = 42$
 $4d + 3t = 45$

27. WXYZ is a rectangle. $WX = 5x - 4$ and $XY = 3x + 2$ and the perimeter of the rectangle is 32. Find the numerical value of ZY.

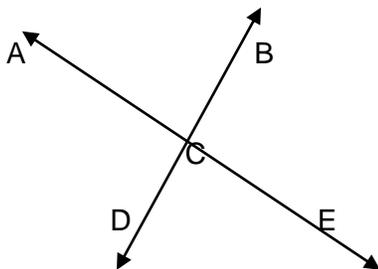
28. Define congruent polygons?

29. AB is perpendicular to BC. Find $\angle A$ and $\angle C$.

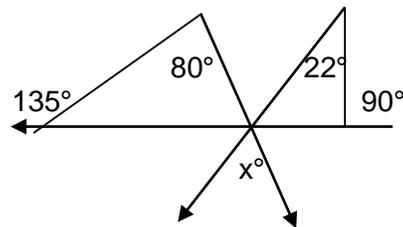


- 30. (a) The medians of a triangle all pass through which point?
- (b) The angle bisectors of a triangle all pass through which point?
- (c) The altitudes of a triangle all pass through which point?
- (d) The perpendicular bisectors of a triangle all pass through which point?

31. If $\angle ACB = 80^\circ$, what is $\angle BCE$?



32.



Find x

33. Two sides of a triangle are 8 and 11. What are the possible measurements of the third side?

34. $\angle A$ and $\angle C$ are a linear pair. If $\angle A = 25^\circ$ then $\angle C$?

35. $\triangle ABC \cong \triangle DEF$, $AB = 10$ feet, $m\angle C = 50^\circ$ and $m\angle B = 43^\circ$. Find (a) $\angle D$ and (b) DE

36. If $A = (-3, 2)$ and $B = (4, 5)$, find the length of AB

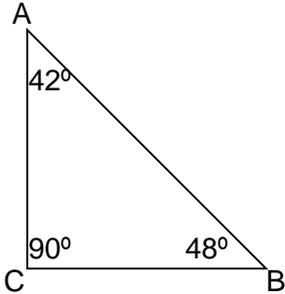
37. For the conditional statement, "If I buy Ms. Doherty presents, then she will be happy!".... the underlined portion is called the ?

38. Assume the following statements are true. "If I go to my geometry lesson, I will get homework. If get homework, then I will understand the work." I didn't go to my geometry lesson. The conclusion of the syllogism is:

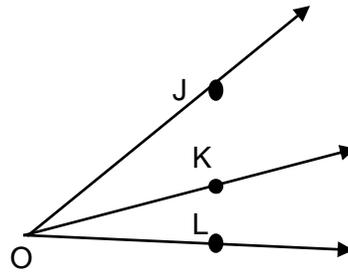
39. (A) How many points determine a plane?
(B) How many points determine a line?

40. $\angle 1$ and $\angle 2$ are supplementary angles and $\angle 1$ and $\angle 3$ are vertical angles. If $m\angle 2 = 65^\circ$, then $m\angle 3 = ?$

41. Diagram not to scale.
The shortest side of the triangle is:



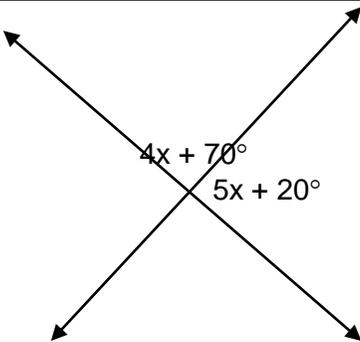
42. If $m\angle JOK = (x + 10)^\circ$ and $m\angle KOL = (4x - 5)^\circ$, and $m\angle JOL = 60^\circ$. Find $m\angle JOK$ and $m\angle KOL$



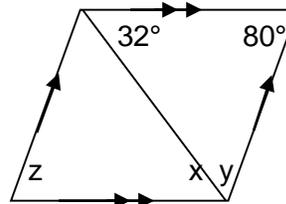
43. If I study for my semester final, then I will do well.
(a) Find the converse of the above statement.
(b) Find the contrapositive of the above statement.

44. A pilot flies 70 miles due north and then 40 miles $S20^\circ W$. Draw a diagram that represents this journey.

45. Solve for x:

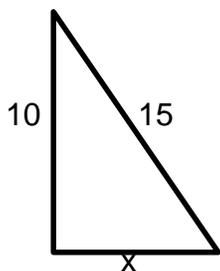


46. Find the values of the variables in the parallelogram:

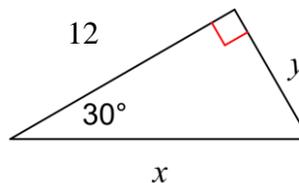


47. Define: (a) A rhombus (b) A rectangle (c) A square. Describe above using sides, angles and diagonals.

48. Find x in simplified radical form:



49. Find x and y.



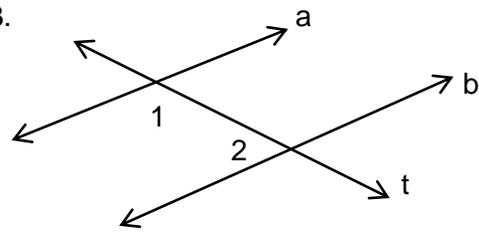
50. $\angle 1$ and $\angle 2$ are a linear pair. $m\angle 2 = 56^\circ$. $m\angle 1 = ?$

51. Find the equation of the perpendicular bisector of $A = (3, 4)$ and $B = (7, 2)$

52. If it is a triangle, classify it as right, obtuse or acute.

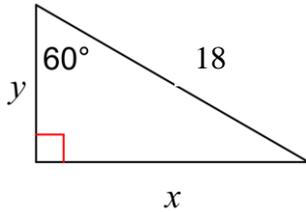
- (a) 6, 11, 17
- (b) 8, 15, 17
- (c) 9, 15, 17
- (d) 7, 24, 26

53.

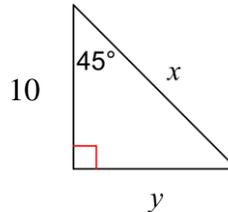


Line a is parallel to b. If $m\angle 1 = 130^\circ$ and $m\angle 2 = (3x-10)^\circ$, find x.

54. Find x and y.



55. Find x and y.



56. Draw an acute angle. Construct the **angle bisector** of the angle using a straight edge and a compass.

57. Draw a line segment. Construct the **perpendicular bisector** of the line segment using a straight edge and a compass.

58. Draw line m and a point A not on the line. Construct the parallel line to line m, through point A using a straight edge and compass.

59. Draw a triangle. COPY your triangle using a straight edge and compass.