3rd 9 Weeks Study Sheet 1

Matching

Match each of the following vocabulary words with its definition.
a.   acute angle
b.   acute triangle
c.   angle
d.   center of rotation
e.   supplementary angles
f.   obtuse triangle
g.   complementary angles
h.   congruent

1.   having the same size and shape

2.   a figure formed by two rays with a common endpoint called the vertex

3.   two angles whose measures add to 90°

4.   an angle that measures less than 90°

5.   a triangle with all angles measuring less than 90°

6.   the point about which a figure is rotated

Match each of the following vocabulary words with its definition.
a.   correspondence
b.   scalene triangle
c.   diameter
d.   equilateral triangle
e.   image
f.   isosceles triangle
g.   line
h.   line of symmetry

7.   a triangle with three congruent sides

8.   a triangle with at least two congruent sides

9.   a figure resulting from a transformation

Match each of the following vocabulary words with its definition.
a.   acute angle
b.   line symmetry
c.   trapezoid
d.   obtuse angle
e.   obtuse triangle
f.   parallel lines
g.   parallelogram
h.   perpendicular lines

10.   a triangle containing one angle measuring greater than 90° and less than 180°

11.   lines in a plane that do not intersect

12.   an angle whose measure is greater than 90° but less than 180°

13.   lines that intersect to form right angles

Match each of the following vocabulary words with its definition.
a.   plane
b.   point
c.   polygon
d.   ray
e.   triangle
f.   rotation
g.   rectangle
h.   reflection

14.   a transformation of a figure in which the figure is flipped across a line

15.   a closed plane figure formed by three or more line segments that intersect only at their endpoints (vertices)

Short Answer

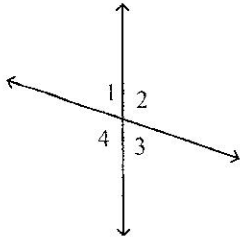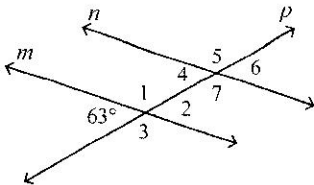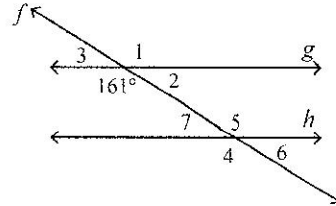**Figure 5-7**

16. In Figure 5-7 above, ∠1 and ∠3 are vertical angles, and ∠2 and ∠4 are vertical angles.
    If m∠4 = 100°, find m∠2.

17. In Figure 5-7 above, ∠1 and ∠3 are vertical angles, and ∠2 and ∠4 are vertical angles.
    If m∠4 = 100°, find m∠3.

In the figure, line m // line n. Find the measure of each given angle.

18. ∠4

19. ∠1

20. ∠7

In the figure, line g // line h. Find the measure of each given angle.

21. ∠4

22. ∠2

23. ∠6

In the figure, line d // line c. Find the measure of each given angle.
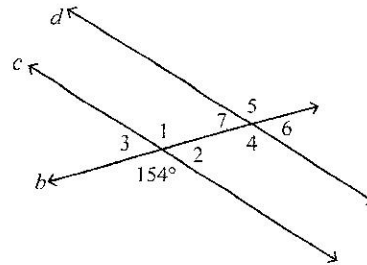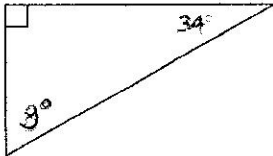

24. ∠5

25. ∠3

26. ∠7
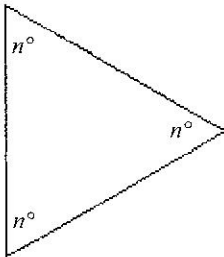
27. Find *m* in the acute triangle.
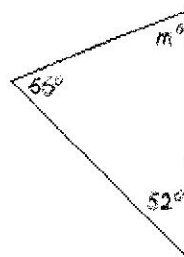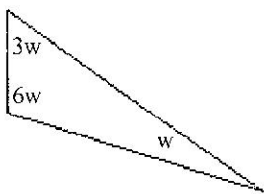
28. Find n in the obtuse triangle.
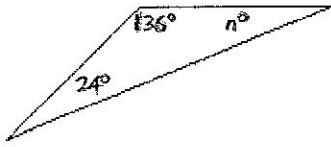
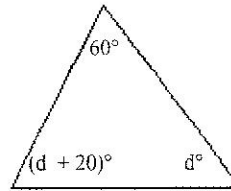29. Find g in the right triangle.

30. Find the angle measures in the equilateral triangle.
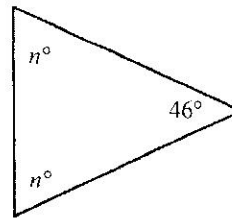

31. Find the missing angle measures in the scalene triangle.

32. Find the missing angle measures in the scalene triangle.

33. Find the missing angle measures in the isosceles triangle.

34. The second angle in a triangle is 3 times as large as the first. The third angle is $\frac{1}{3}$ as large as the second. Find the angle measures, and draw a possible picture.

35. The second angle in a triangle is twice as large as the first. The third angle is $\frac{3}{4}$ as large as the second. Find the angle measures, and draw a possible picture.

36. Find the angle measures in the regular polygon.
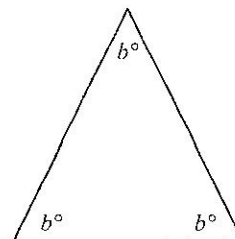
37. The vertices of a triangle are A (2, 3), B (3, 5), and C (5, 3). What are the coordinates for A'B'and C' after the following tranfromation: translate 5 units left.

38. The vertices of a triangle are A (1, 2), B (2, 4), and C (4, 2). What are the coordinates for A'B'and C' after the following tranfromation: translate 4 units down.

39. The vertices of a triangle are A (2, 2), B (3, 4), and C (5, 2). What are the coordinates for A'B'and C' after the following tranfromation: reflect across the x-axis.

40. The vertices of a triangle are A (1, 1), B (2, 3), and C (4, 1). What are the coordinates for A'B'and C' after the following tranfromation: reflect across the y-axis.

41. The vertices of a triangle are A (2, 3), B (3, 5), and C (5, 3). What are the coordinates for A'B'and C' after the following tranfromation: perform a 90 degree clock wise rotation about the origin.

42. The vertices of a triangle are A (1, 1), B (2, 3), and C (4, 1). What are the coordinates for A'B'and C' after the following tranfromation: perform a 90 degree counter clock wise rotation about the origin.

43. The vertices of a triangle are A (2, 3), B (3, 5), and C (5, 3). What are the coordinates for A'B'and C' after the following tranfromation: perform a 180° rotation about the origin.