|  |  |
| --- | --- |
| Angle | Measure |
| *a* |  |
| *b* |  |
| *c* |  |
| *d* |  |
| *e* |  |
| *f* |  |
| *g* |  |
| *h* |  |
| *i* |  |
| *j* |  |
| *k* |  |

**HW 6-1**

1. a. Find the measure of each angle in the diagram.

*e*

*b*

***c***

*d*

*a*

*f*

***g***

*h*

*i*

*j*

***k***

55°

110°

b. What geometric relationship did you use to find angles ***c***, ***g***, and ***k*?**

Explanation for ∠*c*:

 Explanation for ∠*g*:

1

2

3

4

5

7

8

6

Explanation for ∠*k*:

2. Use the diagram to answer the questions below.

a. If angle 1 and angle 7 are congruent, what
property proves the lines are parallel?

b. If angle 5 and angle 8 are congruent, what can be concluded about the lines?

c. If the lines are parallel, what must be true about angle 2 and angle 6? What is the name of the property used to determine this?

d. If the lines are parallel, what must be true about angle 7 and angle 3? What is the name of the property used to determine this?

3. Set up and solve an equation to solve for x in each diagram.

3*x* – 20

2*x* + 20

1. b)

3*x* – 20

2*x* + 20

3*x* + 2

7*x* – 10

1. d)

98°

*x*

48°

**HW 6-2**

For each question determine whether the given figure is a parallelogram.

1.

2.

37ft

27ft

29ft

32ft

45°

137°

43°

135°

Solve for the given variables using properties of parallelograms.



4.

3.

5.

6.

8.

7.

9.

10.

3x - y

1

2x+3y

7

3x - 2y

1

5x+4y

2