Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Math 8

**RIGID MOTIONS AND ANGLES**

1. Determine the measure of each angle from the diagram and explain your reasoning.

M N

O

120o

P Q

m < MOP = \_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

m < MON = \_\_\_\_\_\_

m < NOQ = \_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Lines c and d are parallel to each other. Mark 4 angles that are congruent to each other with an arc.

c

d

1. Circle all the sets of angles that could make a triangle.

50, 50, 100 60, 40, 80 30, 60, 90 90, 90, 90

110, 65, 5 120, 33, 27 99, 80, 1 45, 45, 45

Problems 4 – 7, determine the measure of the missing angle. Show work.

1. 5.

75 20

55 x

x

1. 7.

30

20

140 x

115 x

8. Lines c and d are parallel to each other. Find all the labeled angles.

300

c 1 2

d 3 4

1150 5

m < 1 = \_\_\_\_\_\_ m < 2 = \_\_\_\_\_\_ m < 3 = \_\_\_\_\_\_

m < 4 = \_\_\_\_\_\_ m < 5 = \_\_\_\_\_\_

9. Lines EF and GH are parallel to each other. Find the following angles.

E X Y F

1150

450

G Z H

m < EXZ = \_\_\_\_\_\_

m < YXZ = \_\_\_\_\_\_

m < YZH = \_\_\_\_\_\_

m < ZYX = \_\_\_\_\_\_

m < XZY = \_\_\_\_\_\_