

Name

Answers

Date

# 1.3 – Angles and Measurement

Use the diagram below for #1–8. Find the measure of each angle.

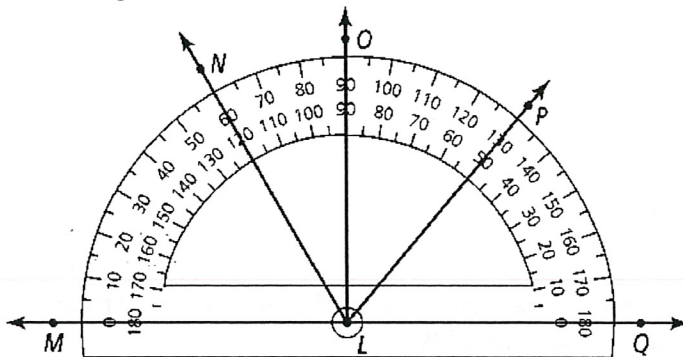
1.  $\angle MLN$   $60^\circ$

2.  $\angle NLP$   $70^\circ$

3.  $\angle NLQ$   $120^\circ$

4.  $\angle OLP$   $40^\circ$

5.  $\angle MLQ$   $180^\circ$



Classify each angle as *acute*, *right*, *obtuse*, or *straight*.

6.  $\angle OLP$  *Acute*

7.  $\angle OLQ$  *Right*

8.  $\angle MLQ$  *Straight*

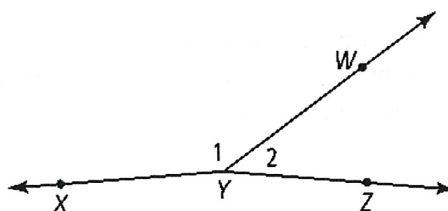
Use the figure at the right for #9 and 10.

9. What is another name for  $\angle XYW$ ?

$\angle 1$  or  $\angle WYX$

10. What is another name for  $\angle WYZ$ ?

$\angle 2$  or  $\angle ZYW$



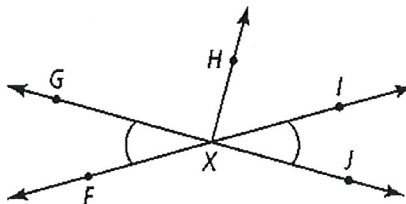
11.  $\angle JKL$  and  $\angle CDE$  are congruent. If  $m\angle JKL = 137$ , what is  $m\angle CDE$ ?  $137^\circ$

Use the figure at the right for #12–15  $m\angle FXH = 130$  and  $m\angle FXG = 49$ .

12.  $\angle FXG \cong \angle FXJ$  or  $\angle JXG$

13.  $\angle IXJ \cong \angle GXF$  or  $\angle FXG$

14.  $m\angle GXH = 81^\circ$



14. Name a straight angle in the figure.

$\angle FXI$  or  $\angle IXF$  or  $\angle GXJ$  or  $\angle JXG$

16. If  $m\angle RZT = 110$ ,  $m\angle RZS = 3s$ , and  $m\angle TZS = 8s$ , what are  $m\angle RZS$  and  $m\angle TZS$ ?

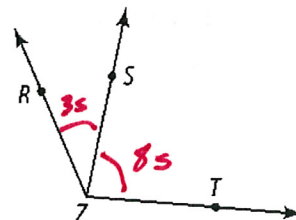
$$3s + 8s = 110$$

$$11s = 110$$

$$s = 10$$

$$m\angle RZS = 30^\circ$$

$$m\angle TZS = 80^\circ$$



17. Algebra  $m\angle OZP = 4r + 2$ ,  $m\angle PZQ = 5r - 12$ , and  $m\angle OZQ = 125$ . What are  $m\angle OZP$  and  $m\angle PZQ$ ?

$$(4r + 2) + (5r - 12) = 125$$

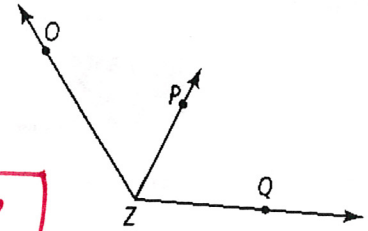
$$9r - 10 = 125$$

$$9r = 135$$

$$r = 15$$

$$m\angle OZP = 62^\circ$$

$$m\angle PZQ = 63^\circ$$



18. Reasoning Elsa draws an angle that measures 56. Tristan draws a congruent angle. Tristan says his angle is obtuse. Is he correct? Why or why not?

No. If it congruent, it has to be the same angle measure. A  $56^\circ$  angle is acute.

19. Lisa makes a cherry pie and an apple pie. She cuts the cherry pie into six equal wedges and she cuts the apple pie into eight equal wedges. How many degrees greater is the measure of a cherry pie wedge than the measure of an apple pie wedge?



$60^\circ$



$45^\circ$

$$60 - 45$$

$$= 15^\circ$$

20. Reasoning  $\angle JNR$  and  $\angle RNX$  are congruent. If the sum of the measures of the two angles is 180, what type of angle are they?

$$x + x = 180$$

$$2x = 180$$

$$x = 90^\circ$$

Right Angle

21. A new pizza place in town cuts their circular pizzas into 12 equal slices. What is the measure of the angle of each slice?

$$\frac{360}{12} = 30^\circ$$