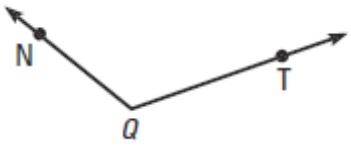
Geometry A
Quiz Review 1.4 – 1.5

Name: _____
Date: _____ Period: _____

For the Quiz Friday, you should be able to:

- ✓ Identify parts of an angle (Section 1.4)
- ✓ Name, measure, and classify angles (Section 1.4)
- ✓ Use Angle Addition Postulate to find measures of angles (Section 1.4)
- ✓ Use angle bisectors to find measures of angles (Section 1.4)
- ✓ Identify adjacent angles, complementary angles, supplementary angles, vertical angles, and linear pairs. (Section 1.5)
- ✓ Find measures of complementary angles, supplementary angles, vertical angles, and linear pair angles. (Section 1.5 and 2.7)

1. Use the diagram below to complete the following:

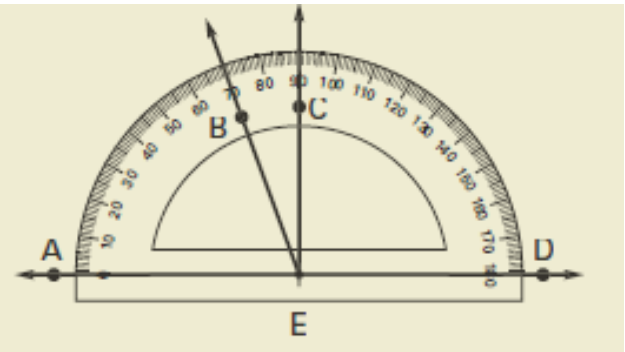


a) Give 3 names for the angle.

b) Identify the vertex of the angle.

c) Identify the sides of the angle.

2. Use the diagram to find the measure of each angle and classify the angle.



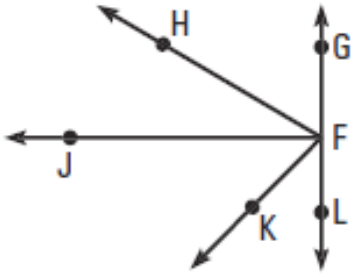
a) $m\angle DEC =$ _____, _____

b) $m\angle DEA =$ _____, _____

c) $m\angle CEB =$ _____, _____

d) $m\angle DEB =$ _____, _____

3. Extend the rays as needed. Use a protractor to find the measure of the given angle. Then classify the angle as acute, obtuse, right, or straight.



a) $m\angle JFL =$ _____, _____

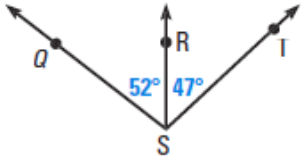
b) $m\angle GFH =$ _____, _____

c) $m\angle GFK =$ _____, _____

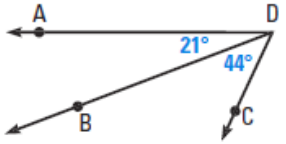
d) $m\angle GFL =$ _____, _____

4. Find the indicated angle measures.

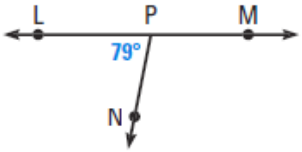
a) $m\angle QST =$ _____



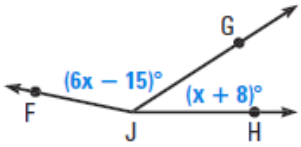
b) $m\angle ADC =$ _____



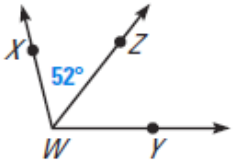
c) $m\angle NPM =$ _____



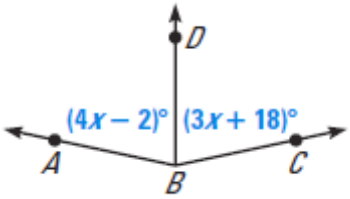
5. Given $m\angle FJH = 168°$, find $m\angle FJG$.



6. Given that $\overrightarrow{WZ}$ bisects $\angle XWY$, find the measure of $\angle XWY$.

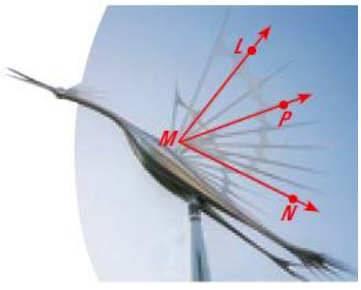


7. Given that $\overrightarrow{BD}$ bisects $\angle ABC$, find $m\angle ABC$.

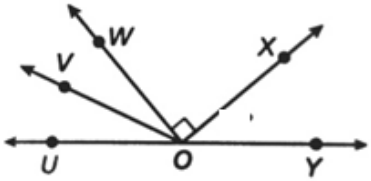


8. **Error Analysis** $\overrightarrow{KM}$ bisects $\angle JKL$, and $m\angle JKM = 30°$. *Describe* and correct the error made in stating that $m\angle JKL = 15°$. Draw a sketch to support your answer.

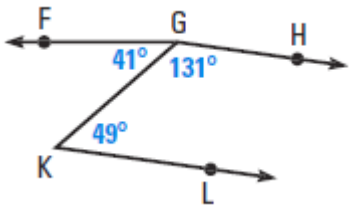
9. In the sculpture shown in the photograph, suppose the measure of $\angle LMN$ is 79° and the measure of $\angle PMN$ is 47°. What is the measure of $\angle LMP$?



10. In the diagram below, $\overrightarrow{OV}$ bisects $\angle UOW$, and $m\angle UOV = 20°$. Find $m\angle XOY$ and $m\angle WOY$



11. In the figure, name a pair of complementary angles, a pair of supplementary angles, and a pair of adjacent angles.



12. $\angle 1$ and $\angle 2$ are complementary angles. If $m\angle 1 = 43°$, what is $m\angle 2$?

13. $\angle 1$ and $\angle 2$ are supplementary angles. If $m\angle 1 = 27°$, what is $m\angle 2$?

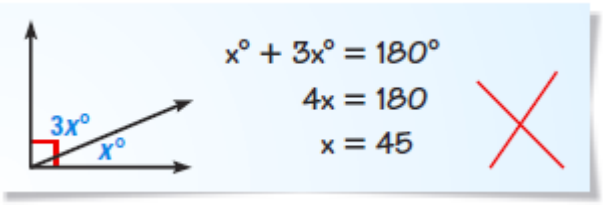
14. $\angle A$ and $\angle B$ are complementary angles. Find the measures of $\angle A$ and $\angle B$, if $m\angle A = (11x + 24)°$ and $m\angle B = (x + 18)°$.

15. $\angle A$ and $\angle B$ are supplementary angles. Find the measures of $\angle A$ and $\angle B$, if $m\angle A = (2x - 20)°$ and $m\angle B = (3x + 5)°$.

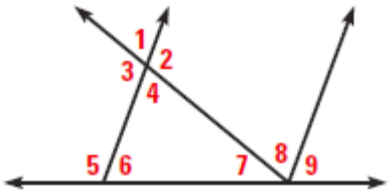
16. The measure of an angle is 3 times the measure of its complement. Find the measures of the two angles.

17. Two angles form a linear pair. The measure of one angle is 4 times the measure of the other angle. Find the measure of each angle.

18. **Error Analysis** *Describe* and correct then error made in finding the value of *x*.



19. Use the diagram to tell whether the angles are *vertical angles*, a *linear pair*, or *neither*.



a) $\angle 1$ and $\angle 4$

b) $\angle 1$ and $\angle 2$

c) $\angle 3$ and $\angle 5$

d) $\angle 2$and $\angle 3$

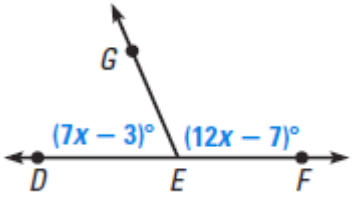
e) $\angle 7$, $\angle 8$, and $\angle 9$

f) $\angle 5$ and $\angle 6$

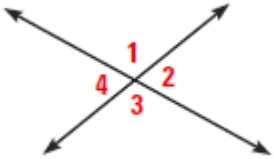
g) $\angle 6$ and $\angle 7$

h) $\angle 5$ and $\angle 9$

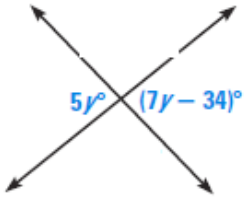
20. Find the measures of $\angle DEG$ and $\angle GEF$.



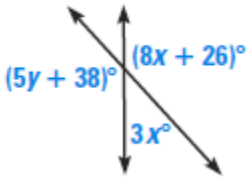
21. In the diagram below, if $m\angle 4 = 71°$, find $m\angle 1$, $m\angle 2$, and $m\angle 3$.



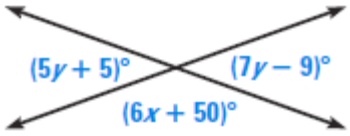
22. Find the value of *y*.



23. Find the values of *x* and *y*.

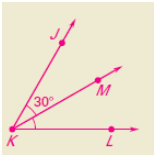


24. Find the values of *x* and *y*. Then find the measures of each angle.



Answer Key

1. a)$\angle NQT, \angle TQN, \angle Q$; Vertex: *Q*; Sides $\overrightarrow{QN}$ *and* $\overrightarrow{QT}$
2. a) 90°, right b) 180°, straight c) 20°, acute d) 110° obtuse
3. a) 90°, right b) 60°, acute c) 135°, obtuse d) 180°, straight
4. a) 99° b) 65° c) 101°
5. 135°
6. 104°
7. 156°
8. To find $m\angle JKL, m\angle JKM$ should be doubled, not halved. $m\angle JKL = 60°$.



9. 34°
10. 50°, 140°
11. $\angle FGK$ *and* $\angle GKL$; $\angle HGK$ *and* $\angle GKL$; $\angle FGK$ *and* $\angle HGK$
12. 47°
13. 153°
14. 68° and 22°
15. 58° and 122°
16. 22.5° and 67.5°
17. 36° and 144°
18. The angles are complementary so they should be equal to 90°. x + 3x = 90, 4x = 90, x = 22.5
19. a) vertical angles b) linear pair c) neither d) vertical angles
    e) neither f) linear pair g) neither h) neither
20. 67° and 113°
21. 109°, 71°, and 109°
22. *y* = 17
23. *x* = 14, *y* = 20
24. *x* = 15, *y* = 7, 140°, 40°, 140°, and 40°