

Math 114
Geometry Assignment #1

Section 2.1
Problems 10, 11, 13, 15, 23, 25

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**graphical figures omitted*

10.)

a.) Three different angles in the following *figure* have **Q** as a vertex. Name each of them in two different ways.

$\angle PQS$ & $\angle SQP$

$\angle SQR$ & $\angle RQS$

$\angle PQR$ & $\angle RQP$

b.) Name two pairs of adjacent angles in the figure.

$\angle PSQ$ & $\angle RSQ$

$\angle PQS$ & $\angle RQS$

11.)

a.) How many different angles less than 180° are shown in the following figure?

10

b.) How many of them are obtuse?

4

c.) How many of them are acute?

6

13.) Use your protractor to measure the following angles. Classify each of them as acute, right, or obtuse.

a.)

acute

b.)

obtuse

c.)

right

15.) In the figure, $\angle BFC = 55^\circ$, $\angle AFD = 150^\circ$, $\angle BFE = 120^\circ$ and $\angle AFE = 180^\circ$. Determine the measures of $\angle AFB$ and $\angle CFD$ without using a protractor.

35°

23.) Convert each of the following angle measures to degrees and decimal fractions of a degree. Round to the nearest thousandth of a degree if necessary.

a.)

$$19^\circ 3' \longrightarrow 19 + \frac{3}{60} = 19.05^\circ$$

b.)

$$12^\circ 6' 36'' \longrightarrow 12 + \frac{1}{10} + \frac{1}{100} = 12.11^\circ$$

c.)

$$247^{\circ}56' \longrightarrow 247 + \frac{56}{60} = 247.93\overline{3}^{\circ}$$

d.)

$$3^{\circ}31'58'' \longrightarrow 3 + \frac{31}{60} + \frac{58}{3600} = 3.532\overline{7}^{\circ}$$

25.) Convert each of the following angle measures in degrees to degrees and minutes. Round to the nearest minute if necessary.

a.)

$$31.6^{\circ} \longrightarrow 31^{\circ}36'$$

b.)

$$95.75^{\circ} \longrightarrow 95^{\circ}45'$$

c.)

$$241.32^{\circ} \longrightarrow 241^{\circ}19'12''$$

d.)

$$25.48^{\circ} \longrightarrow 25^{\circ}28'48''$$