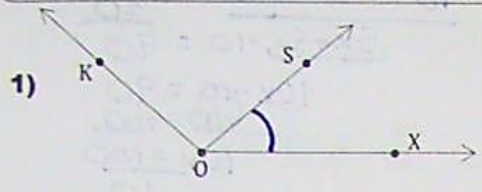


Review Day 2

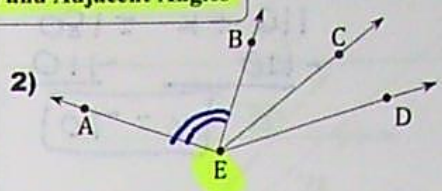
Unit 8 Review | 2-D Geometry

NAME: _____

PART 1: Key Terms, Types of Angles, Measuring Angles and Adjacent Angles

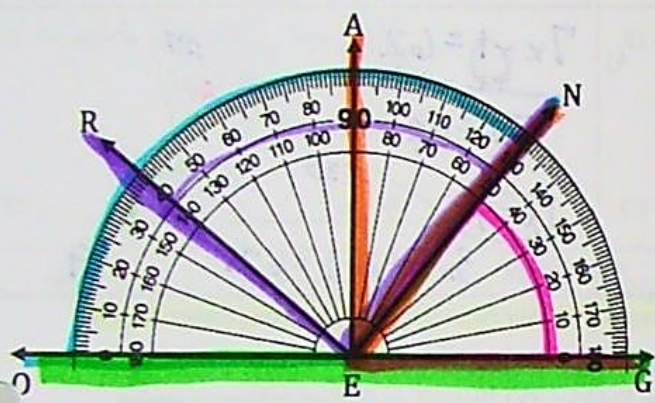


1) $\angle SOX$ is adjacent to \angle SOK
or \angle KOS



2) $\angle AEB$ is adjacent to \angle BEC
BED

3) The vertex is: E

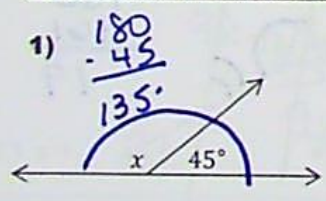


3) Use the protractor to find the measure of each angle. Indicate whether the angle is acute, obtuse, right, or straight.

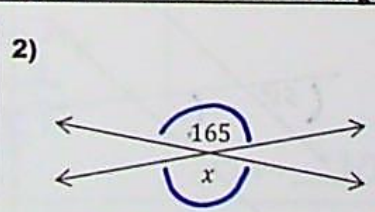
- a) $m\angle NEO = 130^\circ$; obtuse
- b) $m\angle GEN = 50^\circ$; acute
- c) $m\angle AEN = 40^\circ$; acute
- d) $m\angle REN = 90^\circ$; right
- e) $m\angle GEO = 180^\circ$; straight

PART 2: Vertical, Supplementary and Complementary Angles

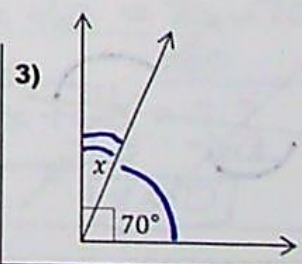
Name the relationship, classify the angles, and find the measure of angle x.



ANGLE RELATIONSHIP: (circle one type)
Vertical Supplementary Complementary
CLASSIFY EACH ANGLE by its measure:
acute (45) and
obtuse (135)
 $\angle x = 135^\circ$



ANGLE RELATIONSHIP: (circle one type)
Vertical Supplementary Complementary
CLASSIFY EACH ANGLE by its measure:
(165) obtuse and
(165) obtuse
 $m\angle x = 165$

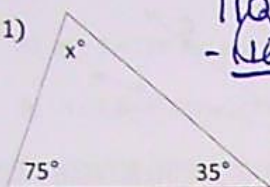


ANGLE RELATIONSHIP: (circle one type)
Vertical Supplementary Complementary
CLASSIFY EACH ANGLE by its measure:
(70) acute and
(20) acute
 $m\angle x = 20$

PART 3: Interior and Exterior Angles of a Triangle

 Find the value of x in each of the following diagrams.

1)

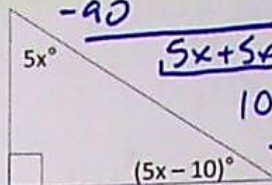


$$\begin{array}{r} 110 + x = 180 \\ -110 \quad -110 \\ \hline x = 70 \end{array}$$

1) Equation: $75 + 35 + x = 180$

 $x = 70$

2)

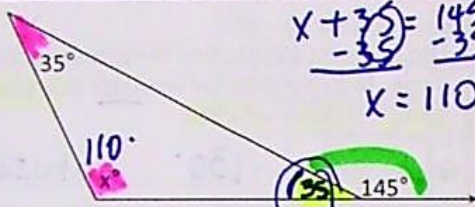


$$\begin{array}{r} 90 + 5x + 5x - 10 = 180 \\ -90 \quad -90 \\ \hline 5x + 5x - 10 = 90 \\ 10x - 10 = 90 \\ +10 \quad +10 \\ \hline 10x = 100 \\ \div 10 \\ \hline x = 10 \end{array}$$

2) Equation: $5x + 5x - 10 = 90$

 $x = 10$

3)

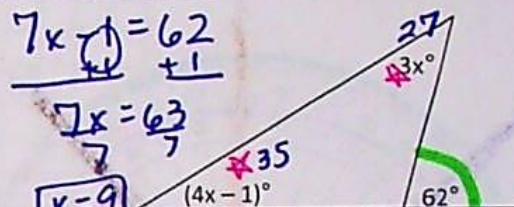


$$\begin{array}{r} x + 35 = 145 \\ -35 \quad -35 \\ \hline x = 110 \end{array}$$

3) Equation: $x + 35 = 145$

 $x = 110$

4)



$$\begin{array}{r} 7x - 1 = 62 \\ +1 \quad +1 \\ \hline 7x = 63 \\ \div 7 \quad \div 7 \\ \hline x = 9 \end{array}$$

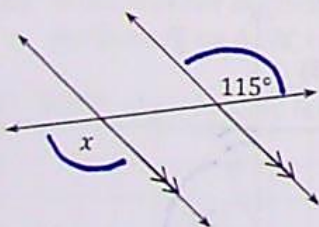
4) Equation: $3x + 4x - 1 = 62$

 $x = 9$
PART 4: Parallel Lines and Transversals [Corresponding Angles, Alternate Interior Angles, Alternate Exterior Angles]
DIRECTIONS:

Find the measure of each missing angle marked with "x". Identify the relationship of the given angles. Use (C) Corresponding, (I) Alternate Interior, (E) Alternate Exterior, (V) Vertical, or (S) Supplementary angles.

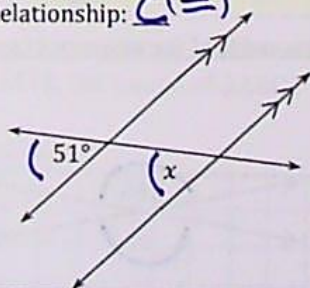
1)

$x = 115$

 Relationship: E (\cong)


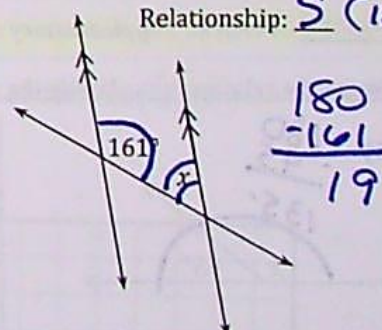
2)

$x = 51$

 Relationship: C (\cong)


3)

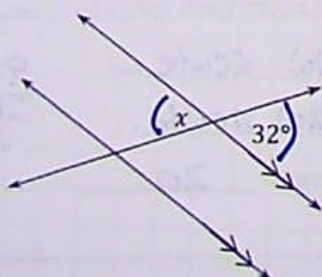
$x = 19$

 Relationship: S (180)


$$\begin{array}{r} 180 \\ -161 \\ \hline 19 \end{array}$$

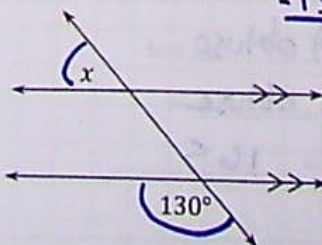
4)

$x = 32$

 Relationship: V (\cong)


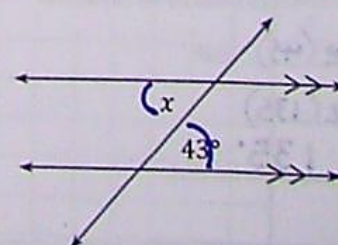
5)

$x = 50$

 Relationship: S (180)


6)

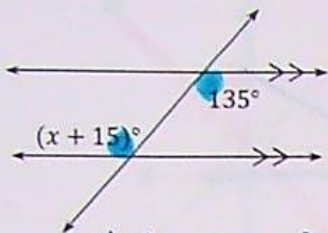
$x = 43$

 Relationship: I (\cong)


PART 5: DIRECTIONS for problems 7 – 10.

- A) Identify the relationship of the given angles using the letters indicated by each type below.
 Use: (C) Corresponding, (I) Alternate Interior, (E) Alternate Exterior, (V) Vertical, or (S) Supplementary angles.
 B) Write an equation to solve for x .
 C) State the value of x .

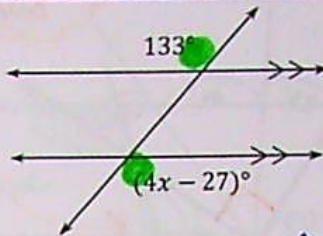
7)


 A) Relationship: Alt. Interior (\cong)

B) Equation
$$\begin{array}{r} x + 15 = 135 \\ -15 \quad -15 \\ \hline x = 120 \end{array}$$

 C) $x =$ 120

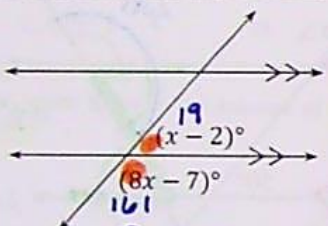
8)


 A) Relationship: Alt Ext (\cong)

B) Equation
$$\begin{array}{r} 4x - 27 = 133 \\ +27 \quad +27 \\ \hline 4x = 160 \\ \frac{4x}{4} = \frac{160}{4} \\ x = 40 \end{array}$$

 C) $x =$ 40

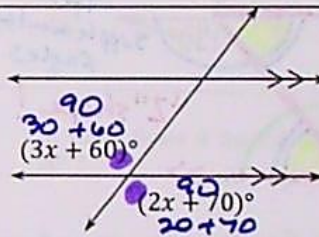
9)


 A) Relationship: Supplementary (180°)

B) Equation
$$\begin{array}{r} (8x - 7) + (x - 2) = 180 \\ 9x - 9 = 180 \\ +9 \quad +9 \\ \hline 9x = 189 \\ \frac{9x}{9} = \frac{189}{9} \\ x = 21 \end{array}$$

 C) $x =$ 21

10)


 A) Relationship: Vertical (\cong)

B) Equation
$$\begin{array}{r} 3x + 60 = 2x + 70 \\ -2x \quad -2x \\ \hline x + 60 = 70 \\ -60 \quad -60 \\ \hline x = 10 \end{array}$$

 C) $x =$ 10

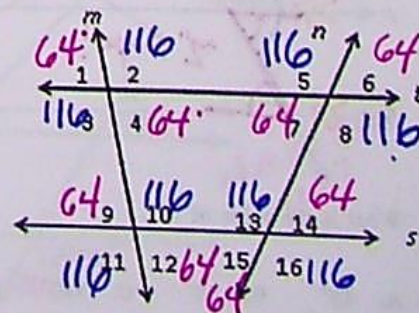
- 11) $t \parallel s$ and lines m and n are transversals of t and s .
 If $m \angle 1 = 64^\circ$ and $m \angle 8 = 116^\circ$, find the measure of each of the angles listed below.

$m \angle 3 =$ 116 $m \angle 5 =$ 116

$m \angle 10 =$ 116 $m \angle 7 =$ 64

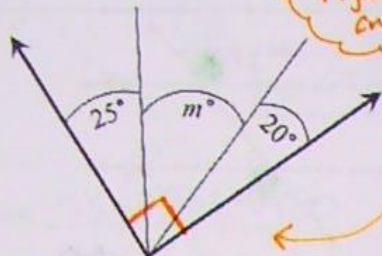
$m \angle 9 =$ 64 $m \angle 16 =$ 116

$$\begin{array}{r} 180 \\ -64 \\ \hline 116 \end{array}$$



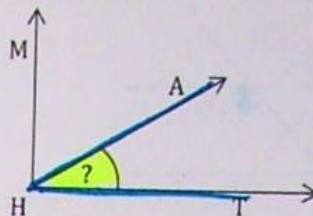
PART 6: The following questions are **MULTIPLE CHOICE**. Circle the letter of the correct answer for each question.

- 1) If the two rays are perpendicular, what is the value of m ?



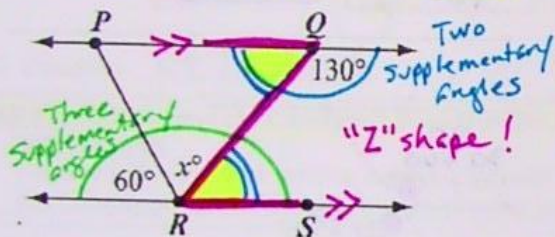
- A. 45° B. 90°
 C. 25° D. 20°

- 2) Which of the following is a correct name for the angle indicated below with the question mark?



- A. $\triangle HAT$ B. $\triangle MHT$
 C. $\triangle H$ D. $\triangle THA$

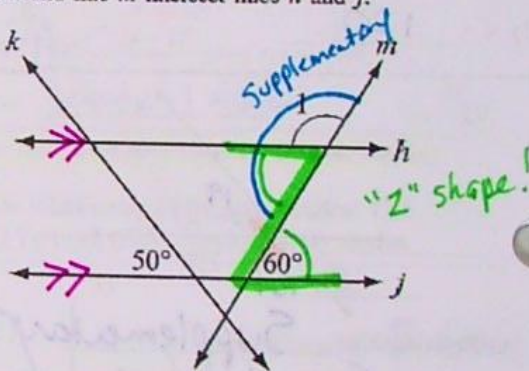
- 3) In the diagram below, \overline{PQ} and \overline{RS} are parallel.



Based on the angle measures in the diagram, what is the value of x ?

- A. 70 B. 60 C. 50 D. 40

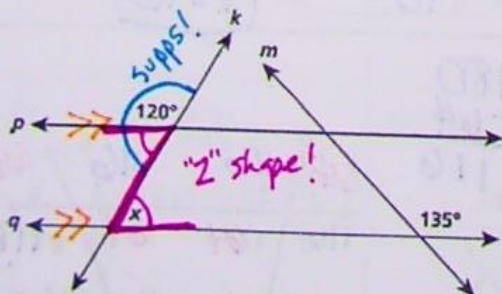
- 4) In the diagram below, lines h and j are parallel. Line k and line m intersect lines h and j .



Based on the angle measures in the diagram, what is $m\angle 1$?

- A. 50° B. 60° C. 120° D. 130°

- 5) In the diagram below, lines k and m intersect parallel lines p and q .

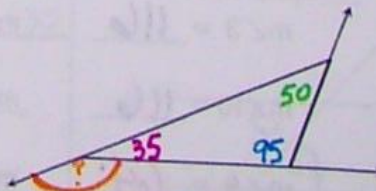


What is the value of x ?

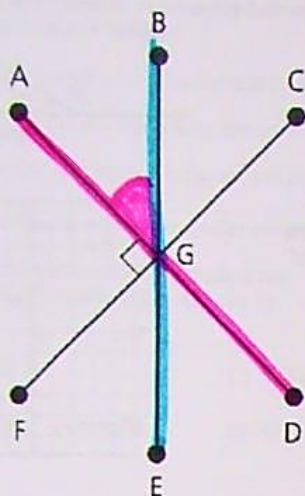
- A. 45° B. 60° C. 120° D. 135°

- 6) The measures of the angles of a triangle are 50° , 35° , and 95° . What is the measure of the largest exterior angle of the triangle?

- A. 85° B. 130° C. 145° D. 150°



7) A diagram is shown below.

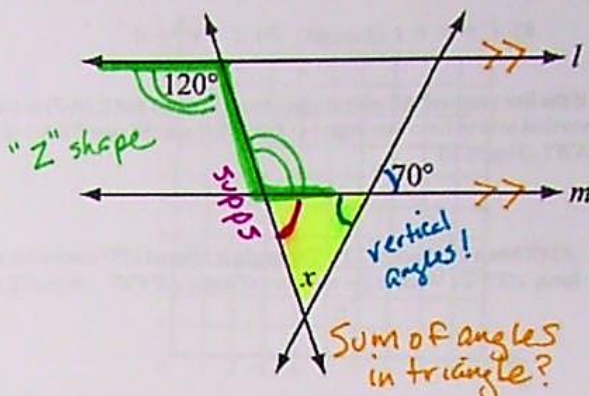


Which angle must be congruent to $\angle AGB$?

- A. $\angle DGE$
- B. $\angle EGA$
- C. $\angle AGF$
- D. $\angle CGD$

8)

Line l is parallel to line m . Two transversals intersect lines l and m , as shown in the diagram below.



Based on the angle measures in the diagram, what is x ?

- A. 40°
- B. 50°
- C. 60°
- D. 70°

9) In which figure is the measure of $\angle 1$ equal to 45° ?

- A.
- B.
- C.
- D.

10) In which figure is the measure of $\angle 1$ not equal to 60° ?

- A.
- B.
- C.
- D.