

Station #1 Answers

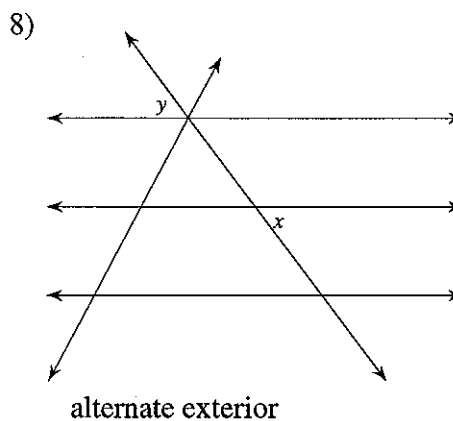
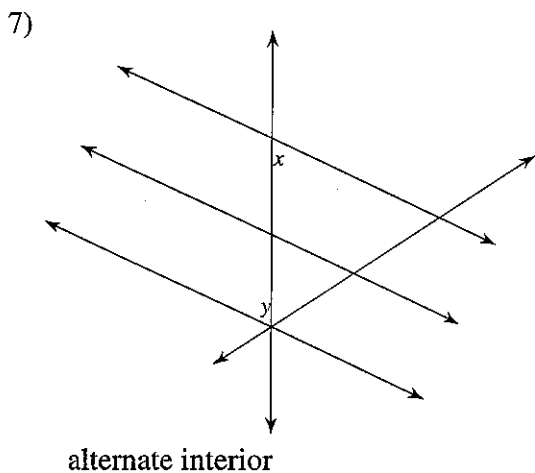
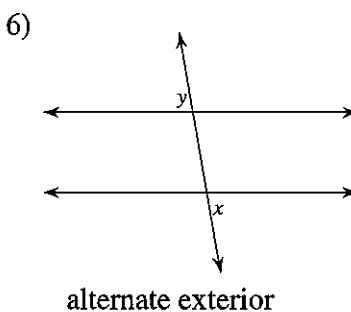
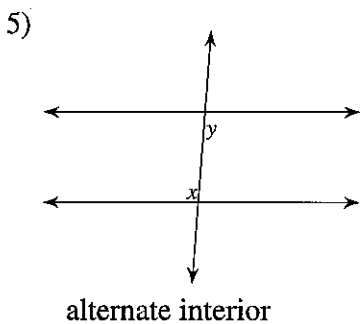
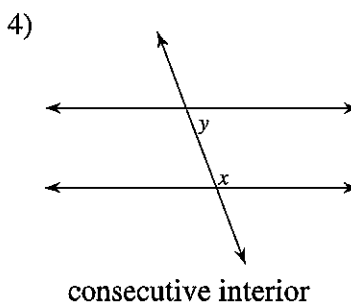
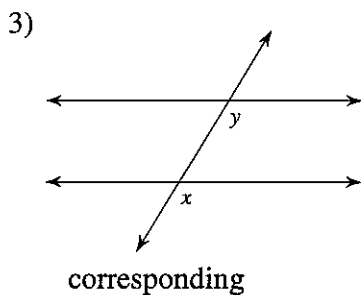
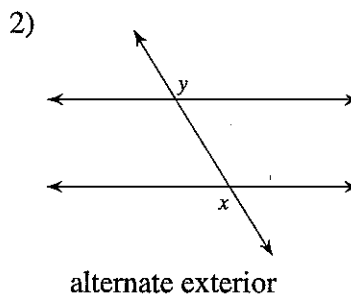
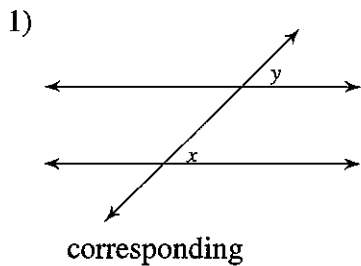
Kuta Software - Infinite Geometry

Name _____

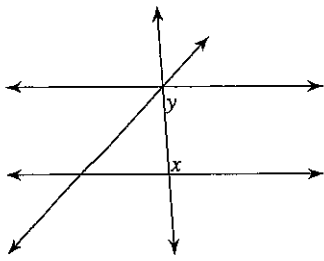
Parallel Lines and Transversals

Date _____ Period _____

Identify each pair of angles as corresponding, alternate interior, alternate exterior, or consecutive interior.

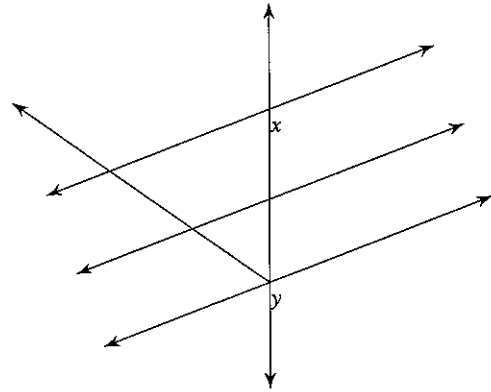


9)



consecutive interior

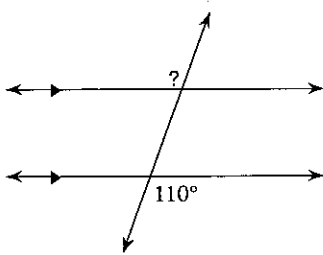
10)



corresponding

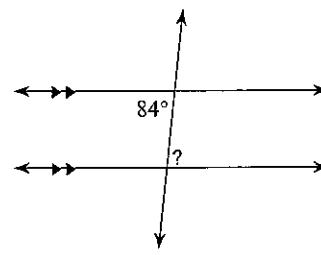
Find the measure of each angle indicated.

11)



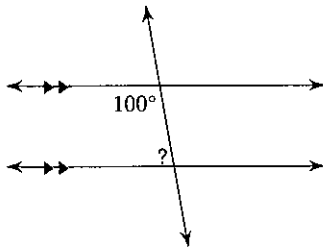
110°

12)



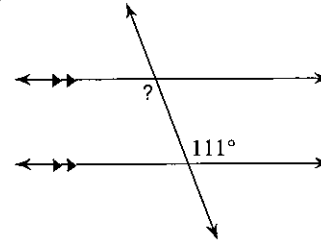
84°

13)



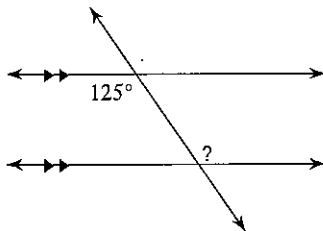
80°

14)



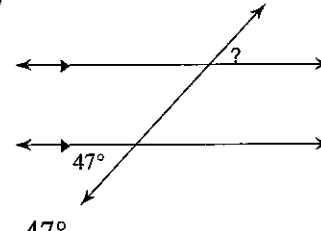
111°

15)



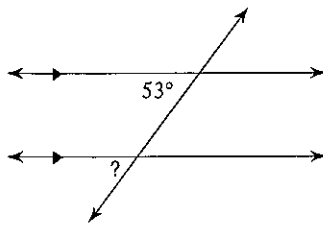
125°

16)



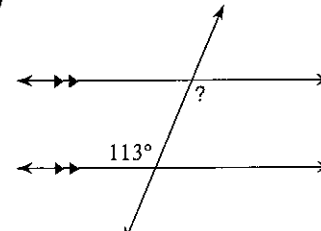
47°

17)



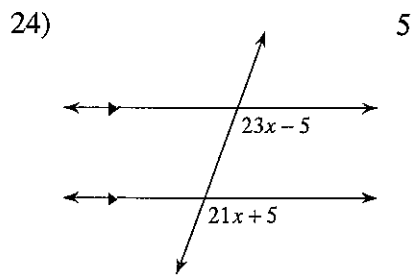
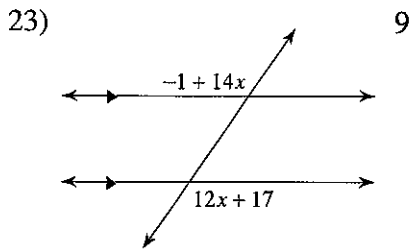
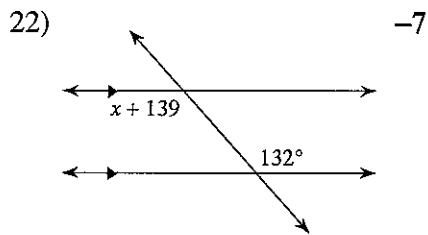
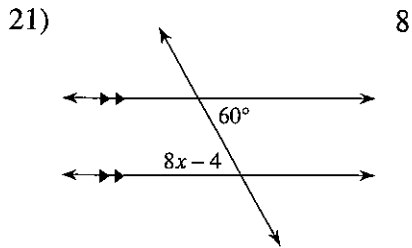
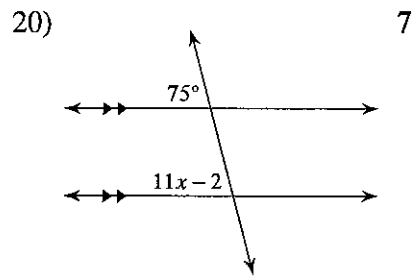
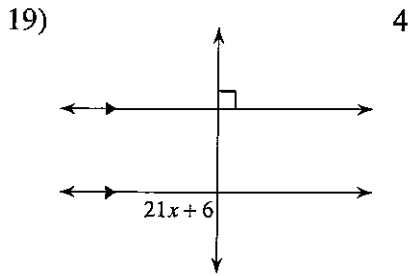
53°

18)

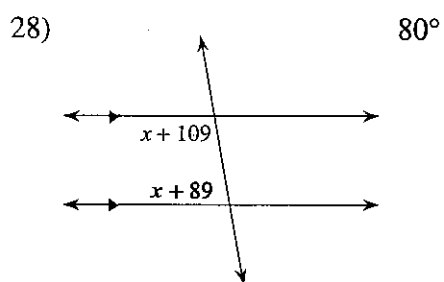
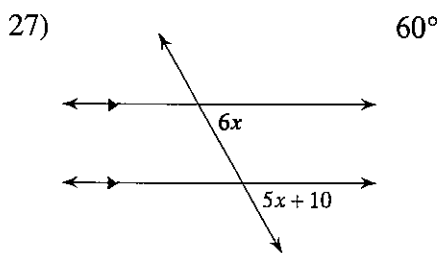
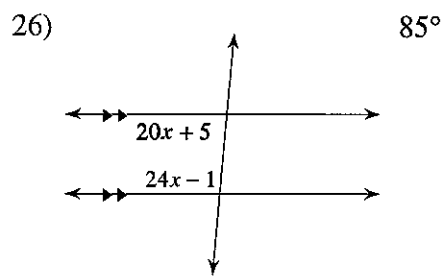
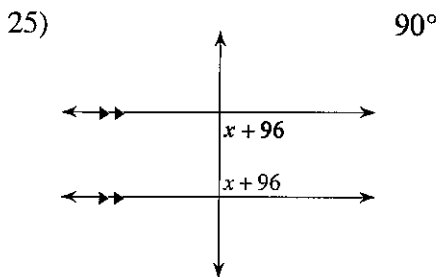


113°

Solve for x .



Find the measure of the angle indicated in bold.



Student Name: _____

Score: _____

Parallel Lines and Transversals Worksheet

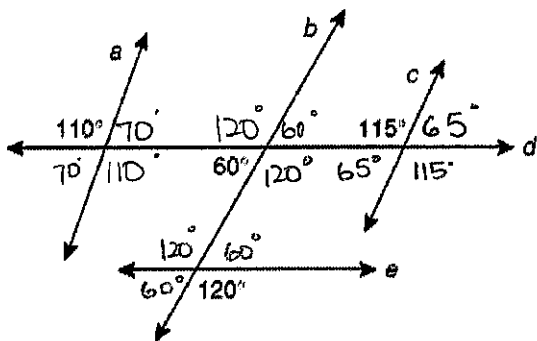
Write all the angles from the given angles:

G.G.35: Parallel Lines and Transversals: Determine if two lines cut by a transversal are parallel based on the measure of given pairs of angles formed by the transversal and lines

1 A transversal intersects two lines. Which condition would always make the two lines parallel?

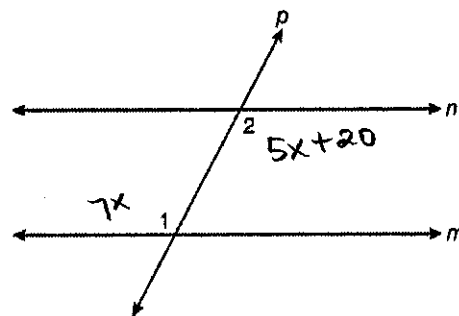
- 1) Vertical angles are congruent.
- 2) Alternate interior angles are congruent.
- 3) Corresponding angles are supplementary. \cong
- 4) Same-side interior angles are complementary. \cong supplementary

2 Based on the diagram below, which statement is true?



- 1) $a \parallel b$
- 2) $a \parallel c$
- 3) $b \parallel c$
- 4) $d \parallel e$

3 In the diagram below, line p intersects line m and line n .



If $m\angle 1 = 7x$ and $m\angle 2 = 5x + 30$, lines m and n are parallel when x equals

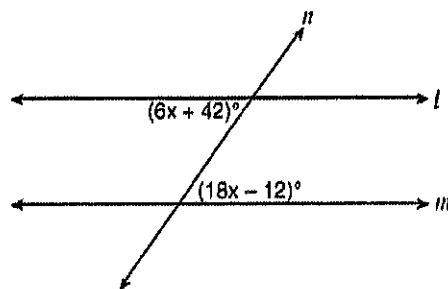
- 1) 12.5
- 2) 15
- 3) 87.5
- 4) 10

$$7x = 5x + 20$$

$$2x = 20$$

$$x = 10$$

4 Line n intersects lines l and m , forming the angles shown in the diagram below.



Which value of x would prove $l \parallel m$?

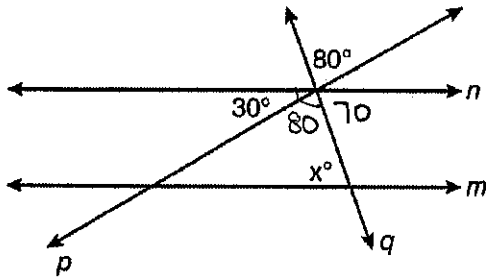
- 1) 2.5
- 2) 4.5
- 3) 6.25
- 4) 8.75

$$6x + 42 = 18x - 12$$

$$54 = 12x$$

$$4.5 = x$$

- 5 In the diagram below, lines n and m are cut by transversals p and q .



What value of x would make lines n and m parallel?

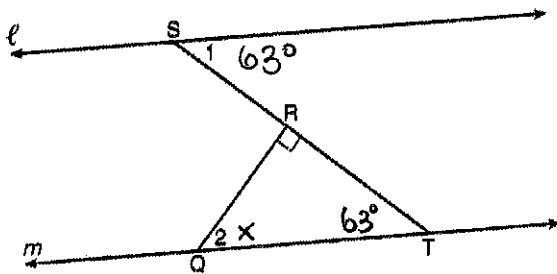
- 1) 110
2) 80
3) 70
4) 50

$$30 + 80 + x = 180$$

$$x = 70$$

* Same side interior \angle s *

- 6 In the diagram below, $l \parallel m$ and $\overline{QR} \perp \overline{ST}$ at R .



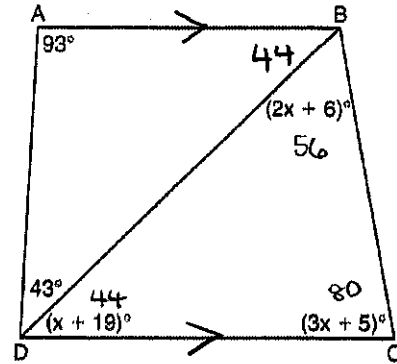
If $m\angle 1 = 63$, find $m\angle 2$.

$$x + 90 + 63 = 180$$

$$x + 153 = 180$$

$$x = 27$$

- 7 In the diagram below of quadrilateral $ABCD$ with diagonal \overline{BD} , $m\angle A = 93$, $m\angle ADB = 43$, $m\angle C = 3x + 5$, $m\angle BDC = x + 19$, and $m\angle DBC = 2x + 6$. Determine if \overline{AB} is parallel to \overline{DC} . Explain your reasoning.



$$x + 19 = 44$$

$$x = 25$$

check: $44 + 56 + 80 = 180 \checkmark$

