

## Fall Final Geometry A

### Fill in the Blank

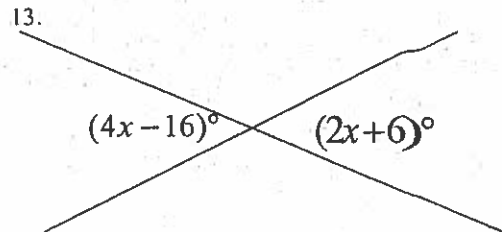
1. The sum of two supplementary angles is
  - a.  $90^\circ$
  - b.  $180^\circ$
  - c.  $120^\circ$
  - d.  $0^\circ$
  - e. none of the above
  
2. If the  $m\angle abc = 64^\circ$ , the measure of its complement would be
  - a.  $36^\circ$
  - b.  $26^\circ$
  - c.  $64^\circ$
  - d.  $116^\circ$
  - e. none of the above
  
3. Which is not a way to prove a triangle is congruent?
  - a. ASA
  - b. SSS
  - c. SSA
  - d. AAS
  - e. none of the above
  
4. What is the sum of all the interior angles of a triangle.
  - a.  $360^\circ$
  - b.  $90^\circ$
  - c.  $180^\circ$
  - d.  $270^\circ$
  - e. none of the above
  
5. What is the sum of all the interior angles of a quadrilateral.
  - a.  $360^\circ$
  - b.  $90^\circ$
  - c.  $180^\circ$
  - d.  $270^\circ$
  - e. none of the above
  
6. How would you describe the slope of parallel lines?
  - a. Equal
  - b. opposite
  - c. negative reciprocal
  - d. Multiplied
  - e. none of the above
  
7. How would you describe the slope of perpendicular lines?
  - a. Equal
  - b. opposite
  - c. Multiplied
  - d. negative reciprocal
  - e. none of the above
  
8. What is the name of the line that passes through a set of parallel lines.
  - a. Skew line
  - b. Vertical line
  - c. Transversal
  - d. Horizontal line
  - e. none of the above
  
9. What are the two angles called when they are across from each other when two lines cross?
  - a. Supplementary
  - b. Complimentary
  - c. Straight
  - d. Vertical
  - e. none of the above

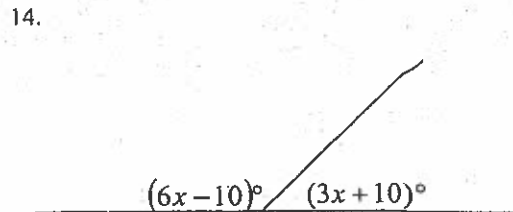
10. What does this symbol stand for  $\cong$ ?
  - a. Parallel
  - b. Perpendicular
  - c. Congruent
  - d. similar
  - e. none of the above

11. What is the slope for the equation  $y = \frac{1}{2}x + 5$ ?
  - a. 1
  - b. 5
  - c. 2
  - d.  $\frac{1}{2}$
  - e. none of the above

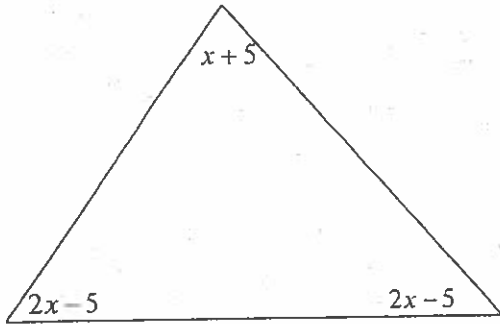
Solve for x.

12.  $3x + 5 = 4x - 2$ 
  - a. 1
  - b. 7
  - c. -7
  - d. -1
  - e. none of the above

13.
 
  - a.  $\frac{26}{6}$
  - b. -11
  - c. 11
  - d.  $-\frac{26}{6}$
  - e. none of the above

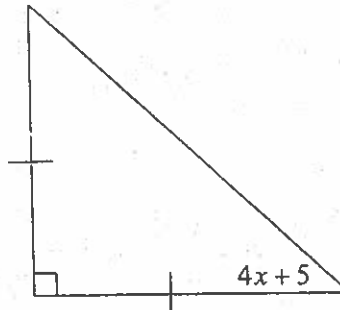
14.
 
  - a.  $\frac{20}{3}$
  - b.  $-\frac{20}{3}$
  - c.  $\frac{20}{9}$
  - d.  $-\frac{20}{9}$
  - e. none of the above

15.



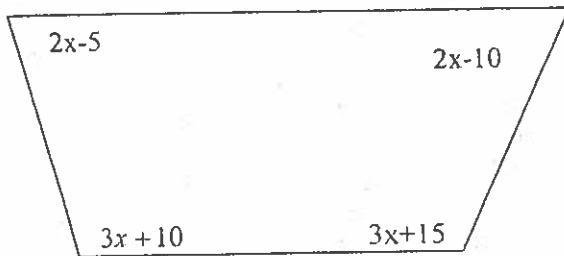
- a. 37      b. 0      c. 10  
d. 35      e. none of the above

18.



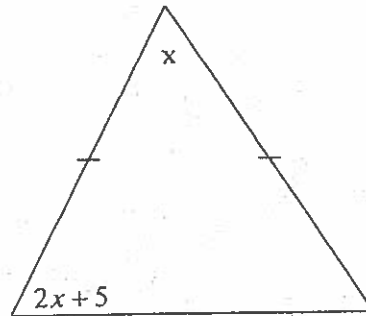
- a. 10                      b. 80  
c. 0                        d. 45  
e. none of the above

16.



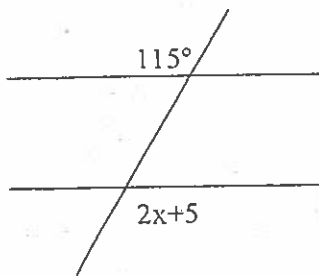
- a. 20                      b. 35  
c. 40                      d. 17  
e. none of the above

19.



- a. 60                      b. 34  
c. 90                      d. 36  
e. none of the above

17.

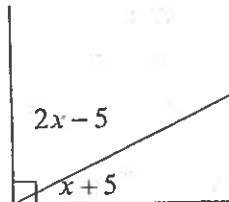


- a. 115                      b. 55  
c. 60                      d. 50  
e. none of the above

20.  $3(2x + 5) = 2x - 5$

- a. 5                        b. -5  
c.  $\frac{10}{4}$                       d.  $-\frac{10}{4}$   
e. none of the above

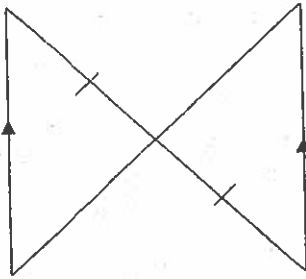
21.



- a. 10                      b. 45  
c. 30                      d. -30  
e. none of the above

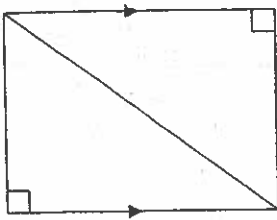


38.



- a. ASA
- b. SSS
- c. SAS
- d. can not be done
- e. Hypotenuse-Leg

39.



- a. ASA
- b. SSS
- c. AAS
- d. Can not be done
- e. Hypotenuse-Leg

40. What property allows you to say that

$$\overline{AB} \cong \overline{AB} ?$$

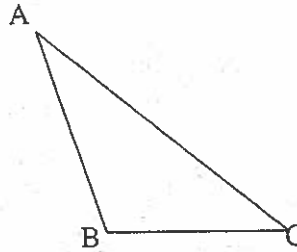
- a. Reflective
- b. Symmetric
- c. Transitive
- d. Substitution
- e. Distributive

41. What postulate allows you to say that

$$\overline{AC} = \overline{AB} + \overline{BC} ?$$

- a. Segment addition postulate
- b. Angle addition postulate
- c. The distance postulate
- d. The Ruler Postulate
- e. None of the above

42. If angle A is the smallest angle, then what is the smallest side?



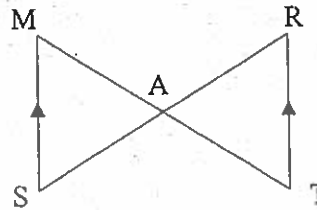
- a.  $\overline{AB}$
- b.  $\overline{AC}$
- c.  $\overline{BC}$
- d.  $\angle B$
- e. none of the above

Use Separate Answer Sheet for Answers on the Proofs.

Proof One- Given :  $\overline{MS} \parallel \overline{RT}$  and A is the

midpoint of  $\overline{MT}$

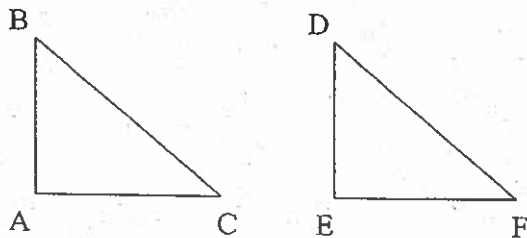
Prove:  $\triangle SAM \cong \triangle RAT$



Statement	Reason
1. Given	1. $\overline{MS} \parallel \overline{RT}$ and A is the midpoint of $\overline{MT}$
2. $\overline{MA} \cong \overline{AT}$	43.
3. $\angle MAS \cong \angle RAT$	44.
4. $\angle SMA \cong \angle RTA$	45.
5. $\triangle SAM \cong \triangle RAT$	46.

**Proof Two-** Given:  $\overline{AC} \cong \overline{EF}$ ,  $\overline{BC} \cong \overline{DF}$ ,  
 $\angle A$  and  $\angle E$  are right angles

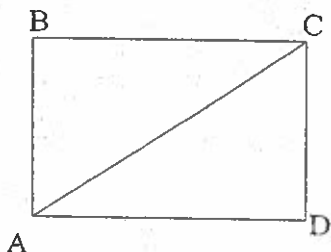
Prove:  $\overline{BA} \cong \overline{DE}$



Statement	Reason
1. Given	1. $\overline{AC} \cong \overline{EF}$ , $\overline{BC} \cong \overline{DF}$ , $\angle A$ and $\angle E$ are right angles
2. $\angle A \cong \angle E$	47.
3. $\triangle BAC \cong \triangle DEF$	48.
3. $\overline{BA} \cong \overline{DE}$	49.

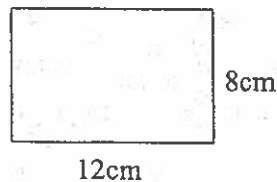
**Proof Three-** Given:  $\overline{BC} \cong \overline{DA}$ ,  $\angle B$  and  $\angle D$  are  
right angles.

Prove:  $\overline{BA} \cong \overline{DC}$



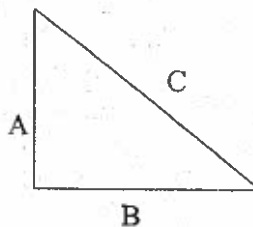
Statement	Reason
1. Given	1. $\overline{BC} \cong \overline{DA}$ , $\angle B$ and $\angle D$ are right angles.
2. $\overline{AC} \cong \overline{AC}$	50.
3. $\triangle ABC \cong \triangle CDA$	51.
4. $\overline{BA} \cong \overline{DC}$	52.

Use the diagram to answer questions 46 and 47.



53. Find the area?  
a.  $20\text{cm}^2$       b.  $40\text{cm}^2$   
c.  $96\text{cm}^2$       d.  $96\text{cm}$   
e. none of the above
54. Find the perimeter?  
a.  $20\text{cm}^2$       b.  $20\text{cm}$   
c.  $40\text{cm}$       d.  $40\text{cm}^2$   
e. none of the above
55. Solve.  $10 + 24 \div 6 \cdot 2 - 8$   
a. 4      b. -14  
c. 10      d. 8  
e. none of the above

Use the figure to answer questions 49-51



56. The name of A:  
a. Leg      b. Base  
c. Hypotenuse      d. Side  
e. Vertex
57. The name of B:  
a. Leg      b. Base  
c. Hypotenuse      d. Side  
e. Vertex
58. The name of C:  
a. Leg      b. Base  
c. Hypotenuse      d. Side  
e. Vertex

