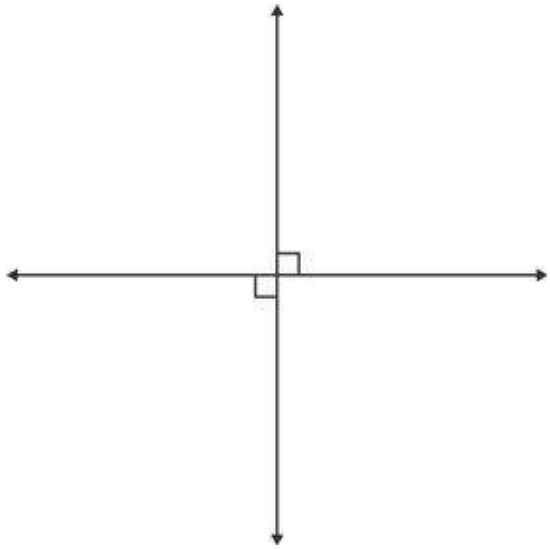
Geometry Mid-Term Review 2013-14

Question 1.

Use the diagram to complete the statement.



Two intersecting lines that are perpendicular to each other create four _____ angles.

A. 45º

B. 90º

C. 180º

D. 360º

Question 2.

Which word describes lines that never intersect?

A. Perpendicular

B. Vertical

C. Parallel

D. Acute

Question 3.

A segment is a geometric figure that consists of

A. two intersecting lines

B. a number between 0 and 360

C. two rays with a common endpoint

D. two distinct points and all the points between them

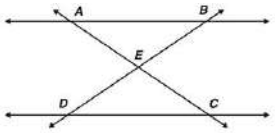
Question 4.

Alyssa has written the following proof.

Given: E is the midpoint of $\overline{AC}$.
$\overline{AB} \parallel \overline{DC}$

Prove: $\triangle AEB \cong \triangle CED$

Proof:



Statements	Reasons
1. E is the midpoint of $\overline{AC}$.	1. Given
2. $\overline{AB} \parallel \overline{DC}$	2. Given
3. $\overline{AE} \cong \overline{EC}$	3. Definition of midpoint
4. $\angle AEB \cong \angle CED$	4. Vertical angles are congruent.
5. $\angle EAB \cong \angle ECD$	5. If two parallel lines are intersected by a transversal, then alternate interior angles are congruent.
6. $\triangle AEB \cong \triangle CED$	6.

Which of the following would correctly complete Statement 6?

A. SSS

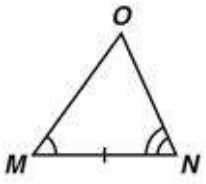
B. SAS

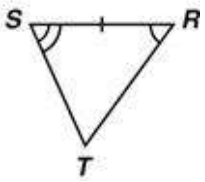
C. ASA

D. AAS

Question 5.

Triangles *MNO* and *RST* are shown.





Which theorem could be used to prove that ΔMNO ≈ ΔRST

A. Angle-Side-Angle (ASA)

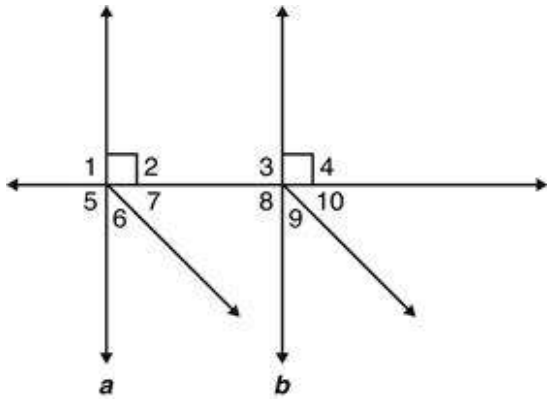
B. Side-Angle-Side (SAS)

C. Side-Side-Angle (SSA)

D. Side-Side-Side (SSS)

Question 6.

Lines *a* and *b* are parallel and ∠6 ≈ ∠7 and ∠9 ≈∠10.



A. ∠3 and ∠8

B. ∠6 and ∠3

C. ∠6 and ∠10

D. ∠10 and ∠8

Question 7.

What is the midpoint of the line segment that contains (-2, 3) and (1, -4)?

A. $\left(-\frac{5}{2}, \frac{5}{2}\right)$

B. $\left(-\frac{3}{2}, \frac{7}{2}\right)$

C. $\left(-\frac{1}{2}, -\frac{1}{2}\right)$

D. $\left(\frac{1}{2}, -\frac{3}{2}\right)$

Question 8.

What are two lines that intersect to form right angles called?

A. oblique

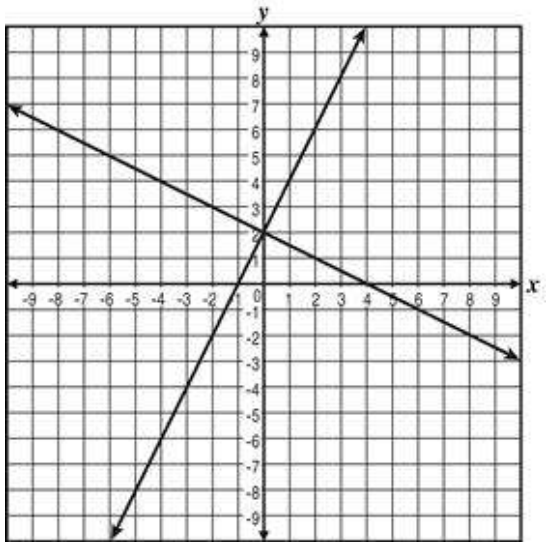
B. parallel

C. perpendicular

D. skew

Question 9.

The slopes of the lines in the graph below can best be described by which term or phrase?



A. equal

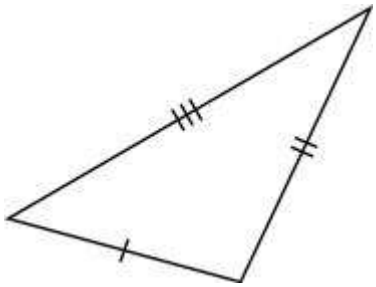
B. opposites

C. reciprocals

D. opposite reciprocals

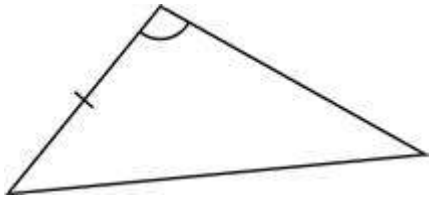
Question 10.

A triangle is shown below.

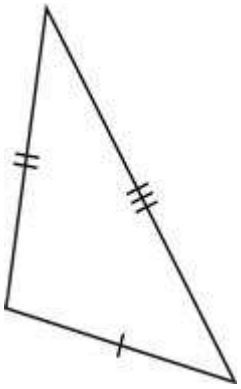


Which triangle is congruent to this triangle?

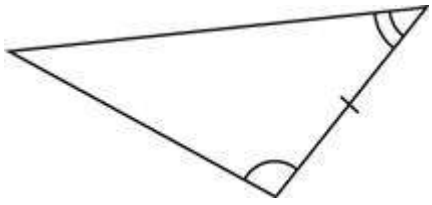
A.



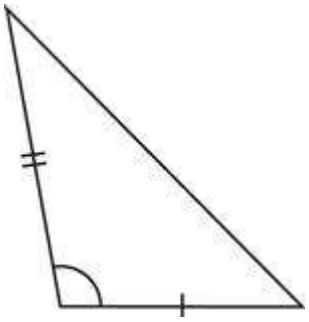
B.



C.

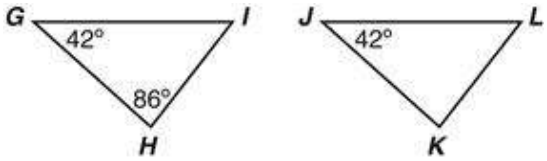


D.



Question 11.

Triangle *GHI* is congruent to Triangle *JKL*.



What is the measure of Angle *L*?

A. 44°

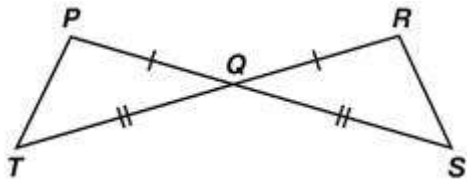
B. 52°

C. 128°

D. 232°

Question 12.

Ben wants to prove that in the figure shown, ΔPQT is congruent to ΔRQS by the Side-Side-Side Postulate.



In Ben's proof, which statement would give the justification to show the triangles are congruent?

A. PT ≈ RS

B. Vertical angles are congruent

C. Alternate interior angles are congruent

D. ∠P ≈ ∠R

Question 13.

What is the slope of a line that is perpendicular to the graph of $y = \frac{1}{2}x + 9$?

A. 2

B. $\frac{1}{2}$

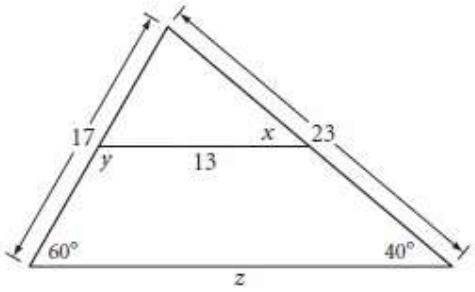
C. $-\frac{1}{2}$

D. −2

Question 14.

The midsegment of the triangle is shown below.

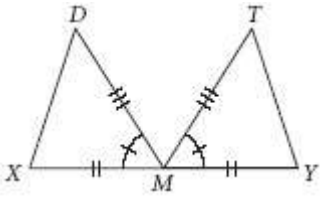
Find X, Y and Z.



Answer on a separate sheet

Question 15.

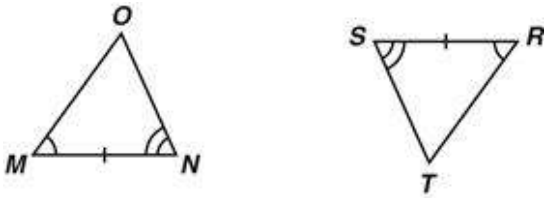
ΔMXD ≅ Δ _____ by _____



Answer on a separate sheet

Question 16.

Triangles *MNO* and *RST* are shown.



Which theorem could be used to prove that ΔMNO ≈ ΔRST

A. Angle-Side-Angle (ASA)

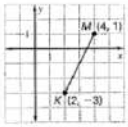
B. Side-Angle-Side (SAS)

C. Side-Side-Angle (SSA)

D. Side-Side-Side (SSS)

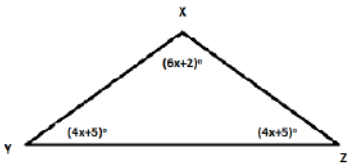
Question 17.

Find the midpoint coordinates of KM.



Answer on a separate sheet

Question 18.



Above is triangle XYZ. Please complete the following:

A. What is the measure of x. Please show work.

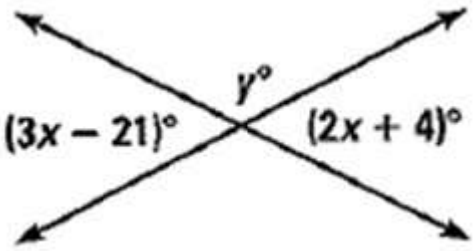
B. What is the measure of each angle?

C. What kind of triangle is it? (isosceles, scalene, equilateral). Explain your solution.

Answer on a separate sheet

Question 19.

Find the value of y.



Answer on a separate sheet