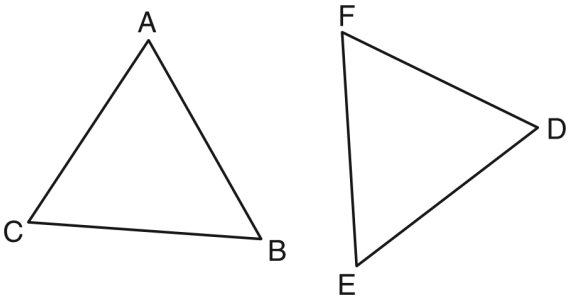
Geometry Hw due Monday April 16

Name: _____ **Date:** _____

1. In the diagram of $\triangle ABC$ and $\triangle DEF$ below, $\overline{AB} \cong \overline{DE}$, $\angle A \cong \angle D$, and $\angle B \cong \angle E$.



Which method can be used to prove $\triangle ABC \cong \triangle DEF$?

A. SSS B. SAS C. ASA D. HL

2. Point A is located at $(4, -7)$. The point is reflected in the x-axis. Its image is located at

A. $(-4, 7)$ B. $(-4, -7)$

C. $(4, 7)$ D. $(7, -4)$

3. Side $\overline{PQ}$ of $\triangle PQR$ is extended through Q to point T. Which statement is *not* always true?

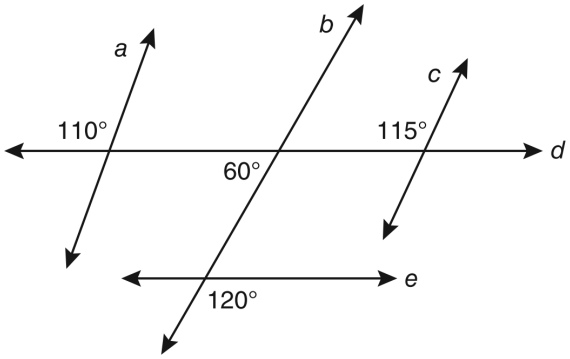
A. $m\angle RQT > m\angle R$

B. $m\angle RQT > m\angle P$

C. $m\angle RQT = m\angle P + m\angle R$

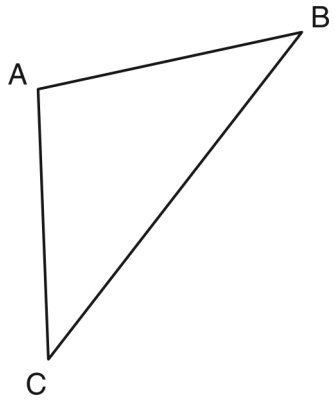
D. $m\angle RQT > m\angle PQR$

4. Based on the diagram below, which statement is true?



A. $a \parallel b$ B. $a \parallel c$ C. $b \parallel c$ D. $d \parallel e$

5. In the diagram of $\triangle ABC$ below, $\overline{AB} \cong \overline{AC}$. The measure of $\angle B$ is 40°.



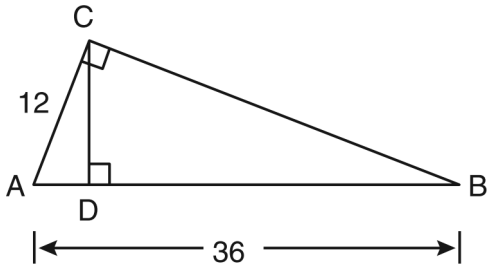
What is the measure of $\angle A$?

A. 40° B. 50° C. 70° D. 100°

6. The diagonal $\overline{AC}$ is drawn in parallelogram $ABCD$. Which method can *not* be used to prove that $\triangle ABC \cong \triangle CDA$?

A. SSS B. SAS C. SSA D. ASA

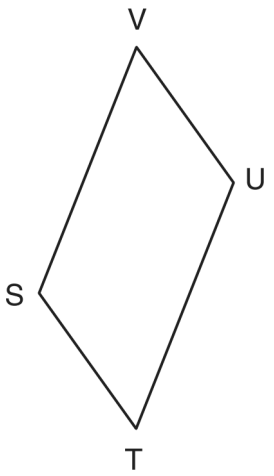
7. In the diagram below of right triangle ACB, altitude $\overline{CD}$ is drawn to hypotenuse $\overline{AB}$.



If $AB = 36$ and $AC = 12$, what is the length of $\overline{AD}$?

A. 32 B. 6 C. 3 D. 4

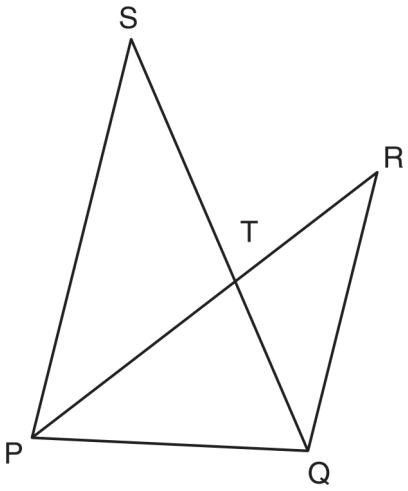
8. In the diagram below of parallelogram $STUV$, $SV = x + 3$, $VU = 2x - 1$, and $TU = 4x - 3$.



What is the length of $\overline{SV}$?

A. 5 B. 2 C. 7 D. 4

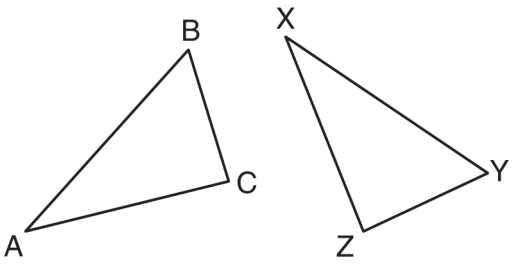
9. In the diagram below, $\overline{SQ}$ and $\overline{PR}$ intersect at T, $\overline{PQ}$ is drawn, and $\overline{PS} \parallel \overline{QR}$



Which technique can be used to prove $\triangle PST \sim \triangle RQT$?

A. SAS B. SSS C. ASA D. AA

10. In the diagram below, $\triangle ABC \cong \triangle XYZ$.



Which two statements identify corresponding congruent parts for these triangles?

A. $\overline{AB} \cong \overline{XY}$ and $\angle C \cong \angle Y$

B. $\overline{AB} \cong \overline{YZ}$ and $\angle C \cong \angle X$

C. $\overline{BC} \cong \overline{XY}$ and $\angle A \cong \angle Y$

D. $\overline{BC} \cong \overline{YZ}$ and $\angle A \cong \angle X$

11. Which set of numbers represents the lengths of the sides of a right triangle?

A. $\{7, 8, 9\}$ B. $\{7, 8, 10\}$

C. $\{6, 8, 10\}$ D. $\{6, 8, 9\}$

12. Which set of numbers could not represent the lengths of the sides of a right triangle?

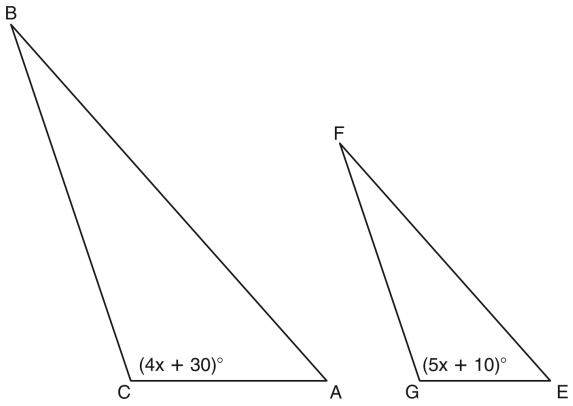
A. $\{3, 4, 5\}$ B. $\{6, 9, 12\}$

C. $\{5, 12, 13\}$ D. $\{8, 15, 17\}$

13. If the legs of a right triangle have lengths of 9 and 7, what is the length of the hypotenuse, expressed in radical form?

14. In right $\triangle DEF$, $m\angle D = 90$ and $m\angle F$ is 12 degrees less than twice $m\angle E$. Find $m\angle E$.

15. In the diagram below, $\triangle ABC \sim \triangle EFG$, $m\angle C = 4x + 30$, and $m\angle G = 5x + 10$. Determine the value of x.



Geometry Hw due Monday April 16 4/25/2018

1.
Answer: C

2.
Answer: C

3.
Answer: D

4.
Answer: D

5.
Answer: D

6.
Answer: C

7.
Answer: D

8.
Answer: A

9.
Answer: D

10.
Answer: D

11.
Answer: C

12.
Answer: B

13.
Answer: $\sqrt{130}$

14.
Answer: 34

15.
Answer: 20