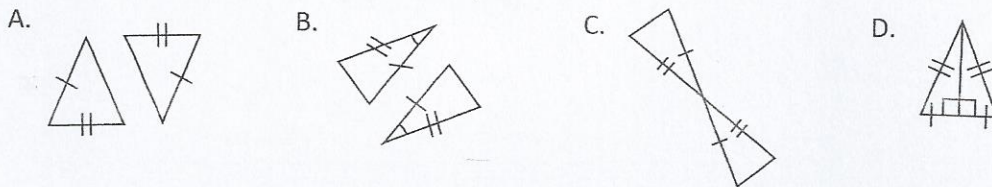
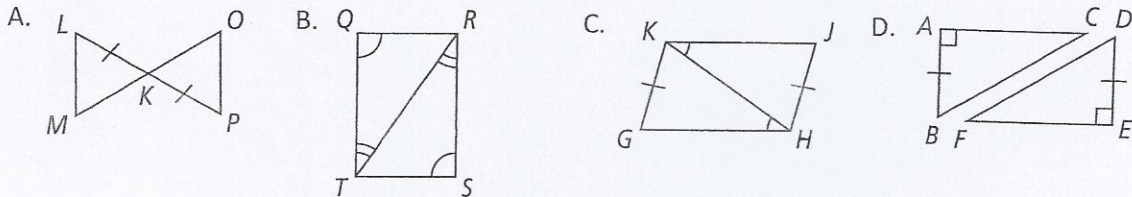


- In an isosceles triangle $\triangle ABC$, the vertex angle is $\angle A$. What can you prove?
 A. $\overline{AB} = \overline{CB}$ B. $m\angle B = m\angle C$ C. $\angle A \cong \angle B$ D. $\overline{BC} \cong \overline{AC}$
- Triangle $\triangle ABC$ where $A(-3, 1)B(2, -3)C(4, -2)$ has an image that is created after a dilation with a scale factor of $k = 2$. What is C' ?
 A. $(4, -2)$ B. $(2, -1)$ C. $(8, -2)$ D. $(8, -4)$

3. Which pair of triangle can be proved by SSS?

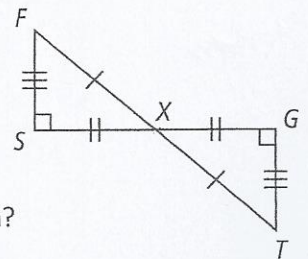


4. Which pair of triangles can be proven congruent by the AAS Theorem?



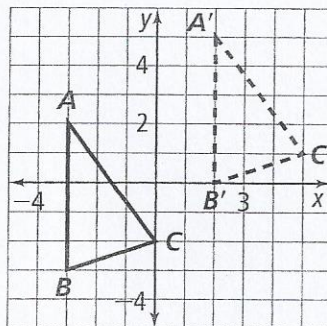
5. Given the diagram at the right, which of the following must be true?

- A. $\triangle XSF \cong \triangle XTG$ B. $\triangle SXF \cong \triangle GXT$ C. $\triangle FXS \cong \triangle GXT$ D. $\triangle FXS \cong \triangle XGT$



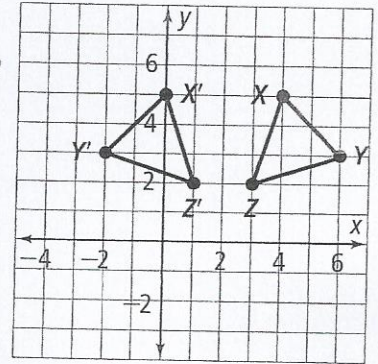
6. In the diagram, $\triangle A'B'C'$ is an image of $\triangle ABC$. Which rule describes the translation?

- A. $(x, y) \rightarrow (x - 5, y - 3)$
 B. $(x, y) \rightarrow (x + 5, y + 3)$
 C. $(x, y) \rightarrow (x - 3, y - 5)$
 D. $(x, y) \rightarrow (x + 3, y + 5)$

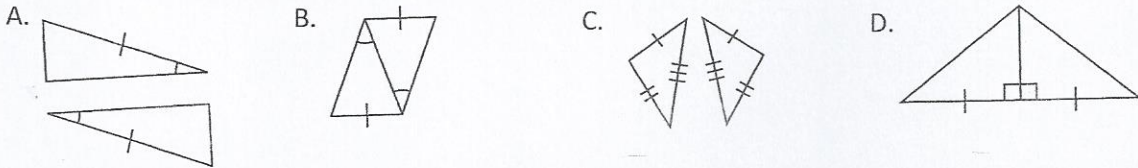


7. What is the image of $A(3, -1)$ after a reflection, first across the $y = 3$, and then across the line $x = -1$?
- A. $(-5, 7)$ B. $(3, -1)$ C. $(-5, -1)$ D. $(1, -5)$

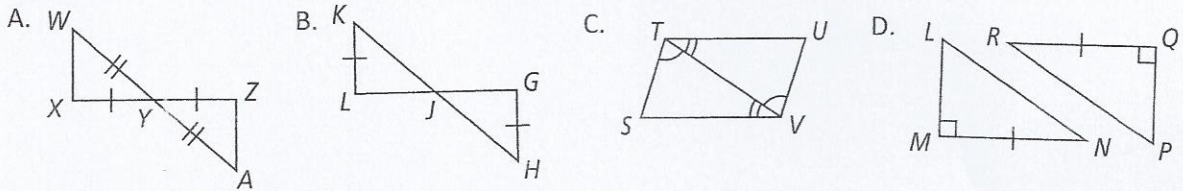
8. In the graph at the right, what is the line of reflection for $\triangle XYZ$ and $\triangle X'Y'Z'$?
- A. The x -axis
 B. The y -axis
 C. $x = 2$
 D. $y = 2$



9. Which pair of triangles can be proven congruent by SAS?



10. Which pair of triangles can be proven congruent by ASA?



11. $\triangle RSV$ has coordinates $R(2, 1), S(3, 2), V(2, 6)$. A translation maps R to R' at $(-4, 8)$. What are the coordinates for S' for this translation?

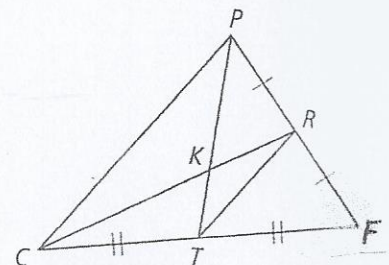
- A. $(-6, -4)$ B. $(-3, 2)$ C. $(-3, 9)$ D. $(-4, 13)$

12. $\triangle ABC$ where $A(1, -5), B(2, 4), C(-1, 2)$ is reflected across the $y = x$ line. What are the coordinates of C' ?

- A. $(1, -2)$ B. $(2, 1)$ C. $(2, -1)$ D. $(-1, 2)$

13. Using the figure at right, if $TR = 12$, what is CP ?

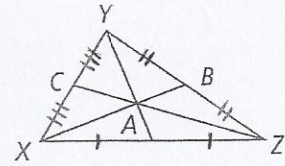
- A. 16 B. 18 C. 24 D. 36



For #14 - 17, use the figure at right where A is the centroid

14. If $CA = 4$, what is CZ ?

15. If $XB = 24$, what is XA ?



16. If $AZ = 20$, what is CA ?

17. If $CZ = 9$, what is AZ ?

For #18 - 21, match the congruent angles or sides if $\triangle ABC \cong \triangle DEF$.

18. $\angle A$

$\angle D$

19. \overline{BC}

$\angle E$

20. $\angle C$

$\angle F$

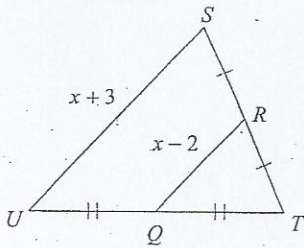
21. \overline{AC}

\overline{DE}

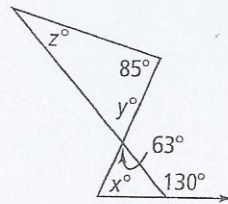
\overline{EF}

\overline{DF}

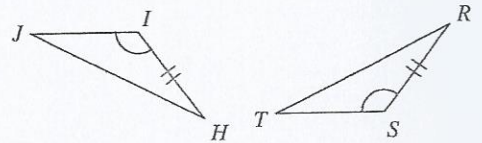
22. Find x and RQ



23. Find the value of each variable



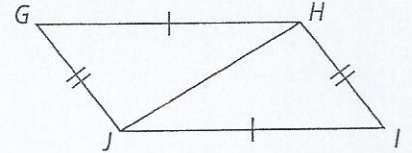
24. What additional information is need to prove that the triangles are congruent by SAS?



25. What is the difference between AAS and ASA? Explain.

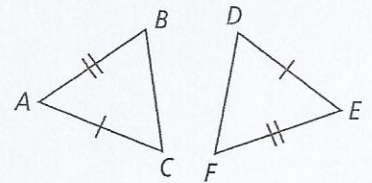
26. If $\triangle XYZ$ where $X(4, 3), Y(2, -3), Z(-3, -1)$ is rotated 270° counterclockwise, what is X' ?
- A. (3, 4) B. (-4, -3) C. (-3, 4) D. (3, -4)

27. Based on the given information in the figure at the right, how can you justify that $\triangle JHG \cong \triangle HJI$?
- A. ASA B. SSS C. AAS D. ASA

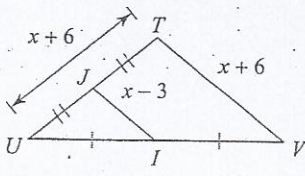


28. Which of the following translations will produce **NOT** congruent figure?
- A. $(x, y) \rightarrow (x, y + 2)$ C. $(x, y) \rightarrow (x - 1, y + 5)$
 B. $(x, y) \rightarrow (2x, 2y)$ D. $(x, y) \rightarrow (x - 3, y)$

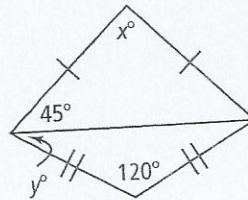
29. The triangles at the right are congruent. Which of the following statements must be true?
- A. $\angle A \cong \angle D$ C. $\overline{AB} \cong \overline{DE}$
 B. $\angle B \cong \angle E$ D. $\overline{BC} \cong \overline{DF}$



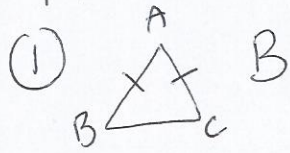
30. Solve for x



31. Find the value of x and y



math II unit 2 test key



(2) D

(3) D

(4) B

(5) B

(6) B

(7) A

(8) C

(9) D

(10) C

(11) $(x, y) \rightarrow (x-6, y+7)$
 $S(3, 2) \rightarrow S'(-3, 9)$ C

(12) $(2, -1)$ C

(13) C

(14) 12

(15) 16

(16) 10

(17) 6

(18) $\angle D$

(19) \overline{EF}

(20) $\angle F$

(21) \overline{DF}

(22) $2(x-2) = x+3$

$$2x-4 = x+3$$

$$-x \quad -x$$

$$x-4 = 3$$

$$+4 \quad +4$$

$$x = 7$$

$$\overline{RQ} = x-2$$

$$= 5$$

(23) $x = 67^\circ$

$$y = 63^\circ$$

$$z = 32$$

(29) $\overline{JI} \cong \overline{TS}$

(25) ASA-side is between the \angle 's.

(26) D

(27) B

(28) B

(29) D

(30) $2(x-3) = x+6$

$$2x-6 = x+6$$

$$-x \quad -x$$

$$x-6 = 6$$

$$+6 \quad +6$$

$$x = 12$$

(31) $x = 90$

$$y = 30$$