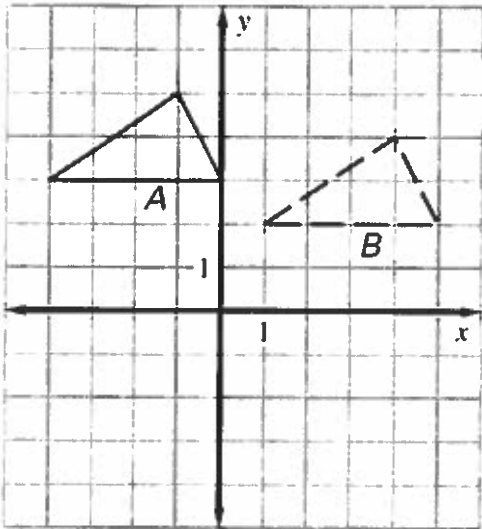


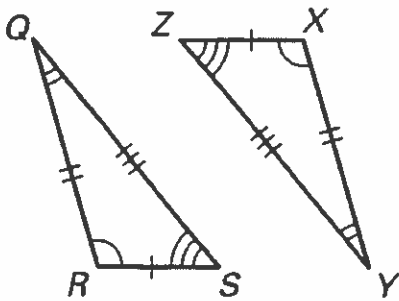
Geometry and Advanced Geometry Chapter Test 4

1. Use coordinate notation to describe the transformation from Figure A to Figure B.



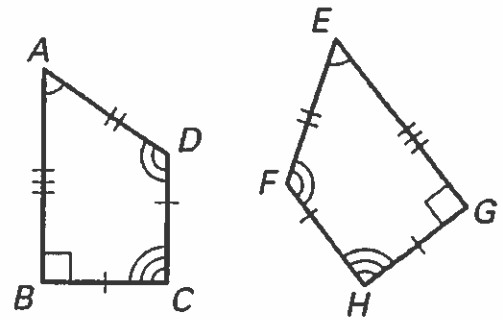
2. Complete the congruence statement for the figures.

$\triangle QRS \cong ?$

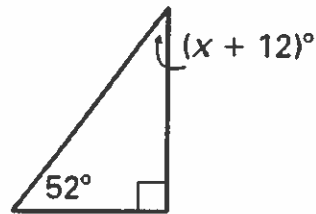


3. Complete the congruence statement for the figures.

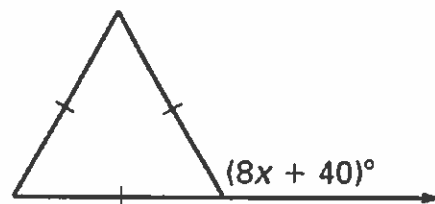
$ABCD \cong ?$



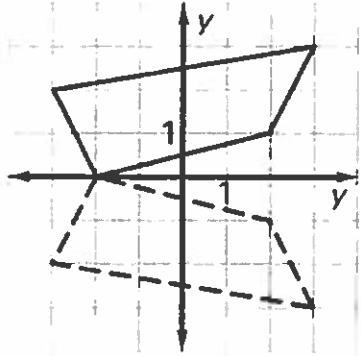
4. Find the value of x . Then classify the triangle by its angles.



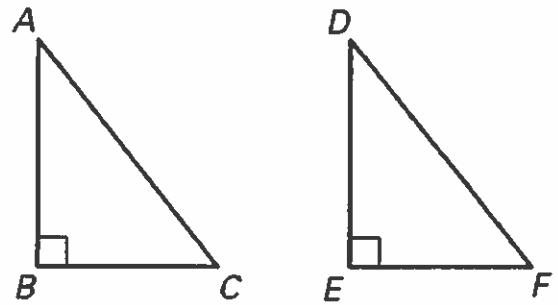
5. Find the value of x . Then classify the triangle by its angles.



6. Tell whether a rigid motion can move the solid figure onto the dashed figure. If so, describe the transformation(s) that you can use. If not, explain why the figures are not congruent.

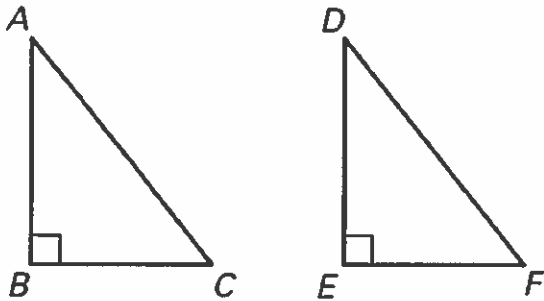


8. State the congruence that is needed to prove $\triangle ABC \cong \triangle DEF$ using the given postulate.



Given: $\overline{AB} \cong \overline{DE}$, $\overline{AC} \cong \overline{DF}$; Use the SSS Congruence Postulate.

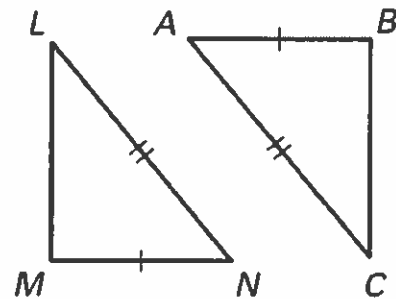
7. State the congruence that is needed to prove $\triangle ABC \cong \triangle DEF$ using the given theorem.



Given: $\overline{BC} \cong \overline{EF}$; Use the Hypotenuse-Leg Congruence Theorem.

9. Decide whether the triangles can be proven congruent by the given postulate or theorem.

$\triangle LMN \cong \triangle CBA$ by HL

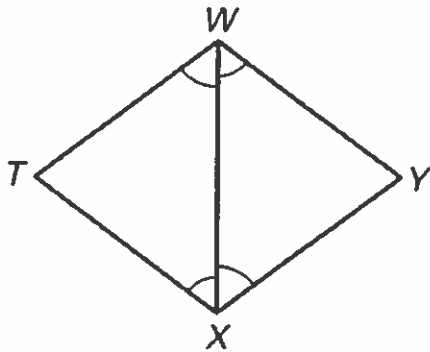


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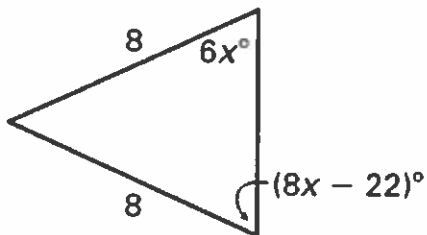
ID: A

10. Decide whether the triangles can be proven congruent by the given postulate or theorem.

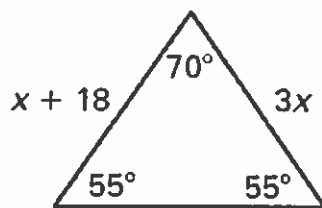
$\triangle TWX \cong \triangle YWX$ by ASA



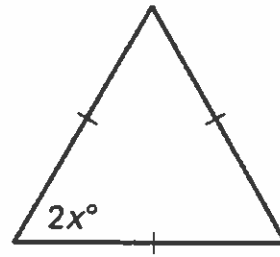
11. Find the value of x .



12. Find the value of x .

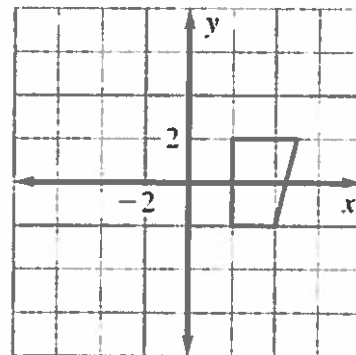


13. Find the value of x .



14. Sketch the image of the figure after the translation.

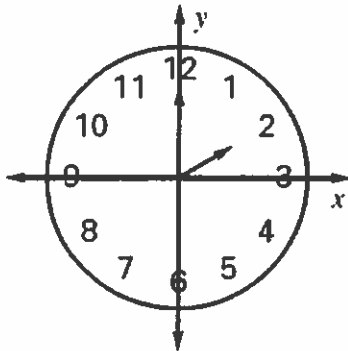
$$(x, y) \rightarrow (x - 6, y + 4)$$



Name: _____

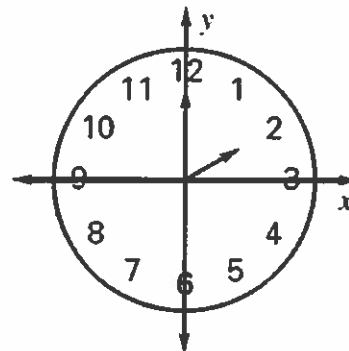
ID: A

15. What number does the hour hand point to when it is transformed in the following way?



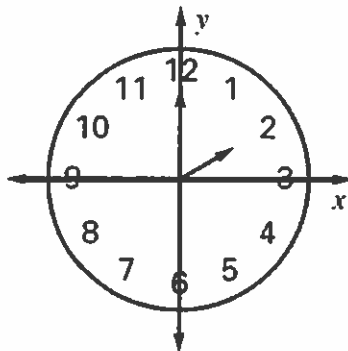
Reflection in the x -axis

17. What number does the hour hand point to when it is transformed in the following way?



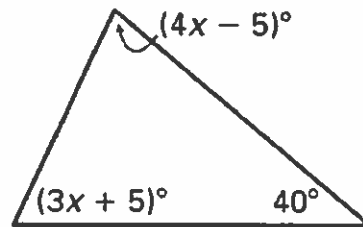
Rotated 90° clockwise

16. What number does the hour hand point to when it is transformed in the following way?

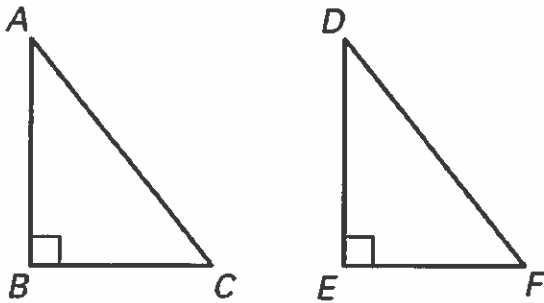


Reflection in the y -axis

18. Find the value of x . Then classify the triangle by its angles.

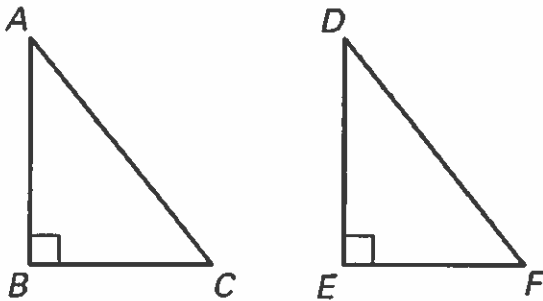


19. State the congruence that is needed to prove $\triangle ABC \cong \triangle DEF$ using the given theorem.



Given: $\angle A \cong \angle D$, $\angle B \cong \angle E$; Use the AAS Congruence Theorem.

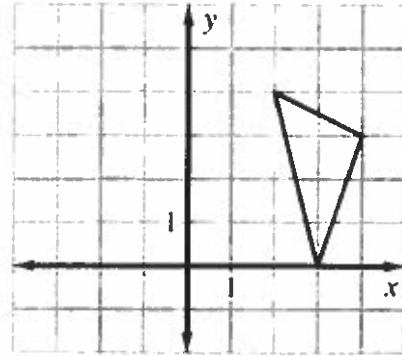
20. State the congruence that is needed to prove $\triangle ABC \cong \triangle DEF$ using the given postulate.



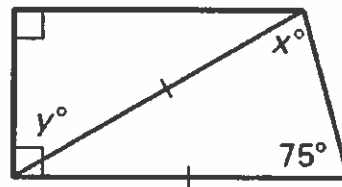
Given: $\angle A \cong \angle D$, $\angle C \cong \angle F$; Use the ASA Congruence Postulate.

21. An image and the translation are given. Sketch the original figure.

$$(x, y) \rightarrow (x+5, y-1)$$



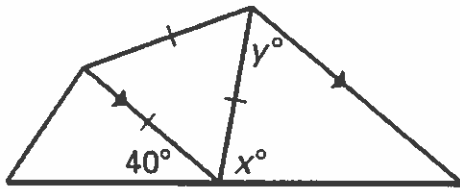
22. Find the values of x and y .



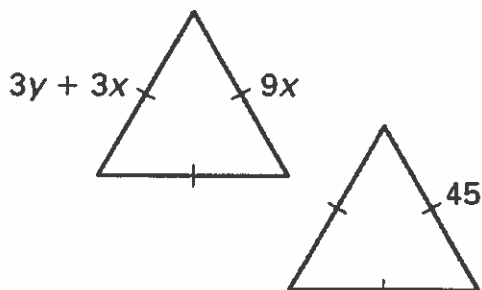
Name: _____

ID: A

23. Find the values of x and y .



24. Find the values of x and y .



25. Is it possible to prove $\triangle ABC \cong \triangle DEF$ using the given information? If so, state the postulate or theorem that you would use.

$$\overline{AB} \cong \overline{DE}, \overline{AC} \cong \overline{DF}, \overline{BC} \cong \overline{EF}$$

26. Is it possible to prove $\triangle ABC \cong \triangle DEF$ using the given information? If so, state the postulate or theorem that you would use.

$$\angle A \cong \angle D, \overline{AB} \cong \overline{DE}, \overline{BC} \cong \overline{EF}$$

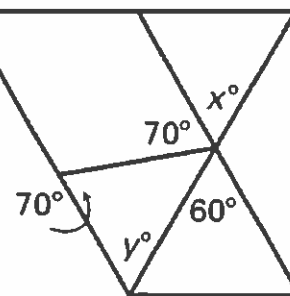
27. Is it possible to prove $\triangle ABC \cong \triangle DEF$ using the given information? If so, state the postulate or theorem that you would use.

$$\angle A \cong \angle D, \angle C \cong \angle F, \angle B \cong \angle E$$

28. Is it possible to prove $\triangle ABC \cong \triangle DEF$ using the given information? If so, state the postulate or theorem that you would use.

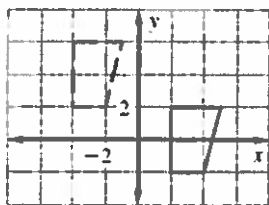
$$\angle A \cong \angle D, \angle C \cong \angle F, \overline{BC} \cong \overline{EF}$$

29. Find the values of x and y .

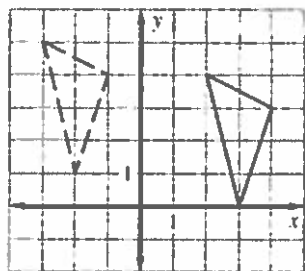


Geometry and Advanced Geometry Chapter Test 4 Answer Section

1. $(x, y) \rightarrow (x+5, y-1)$
2. $\triangle YXZ$
3. $EGHF$
4. 26; right
5. 10; equiangular
6. No; a reflection maps two sides to congruent sides, but the other sides are not congruent.
7. $\overline{AC} \cong \overline{DF}$
8. $\overline{BC} \cong \overline{EF}$
9. no
10. yes
11. 11
12. 9
13. 30



- 14.
15. 4
16. 10
17. 5
18. 20; acute
19. $\overline{BC} \cong \overline{EF}$ or $\overline{AC} \cong \overline{DF}$
20. $\overline{AC} \cong \overline{DF}$



- 21.
22. $x = 75, y = 60$
23. $x = 80, y = 60$
24. $x = 5, y = 10$
25. yes; SSS
26. no

- 27. no
- 28. yes; AAS
- 29. $x = 60, y = 60$