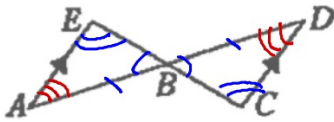


Given: $\overline{AE} \parallel \overline{DC}$; $\overline{AB} \cong \overline{DB}$
 Prove: $\triangle ABE \cong \triangle DBC$



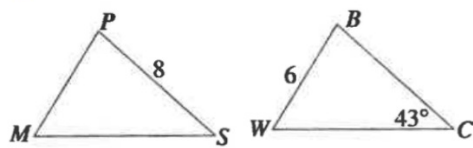
Statement	Reason
1) $\overline{AE} \parallel \overline{DC}$ $\overline{AB} \cong \overline{DB}$	1) Given
2) $\angle EBA \cong \angle CBD$	2) Vertical \angle 's \cong
3) $\angle E \cong \angle C$	3) Alternate Int \angle 's \cong .
4) $\triangle ABE \cong \triangle DBC$	4) AAS

For Exercises 4–6, $\triangle MPS \cong \triangle WBC$. Complete each statement.

4. $BC = ?$ 8

5. $m\angle S = ?$ 43°

6. $PM = ? = 6$



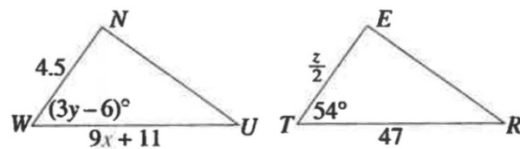
$ET = \frac{PI}{2}$

For Exercises 7–9, $\triangle WUN \cong \triangle TRE$.

7. Find the value of x .

8. Find the value of y .

9. Find the value of z .

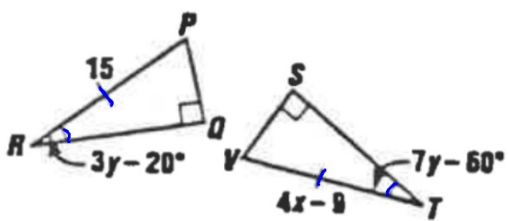


$2\left(\frac{z}{2}\right) = (4.5)2$
 $z = 9$

$9x + 11 = 47$
 $9x = 36$
 $x = 4$

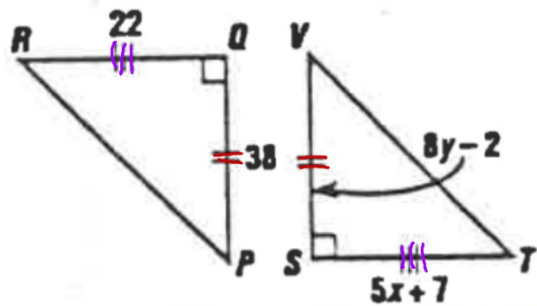
$3y - 6 = 54$
 $3y = 60$
 $y = 20$

Find the value of x and y given the triangles are congruent



$$\begin{aligned} 4x - 8 &= 15 \\ 4x &= 24 \\ x &= 6 \end{aligned}$$

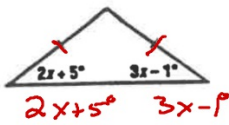
$$\begin{aligned} 7y - 60 &= 3y - 20 \\ 4y - 60 &= -20 \\ \quad +60 \quad +60 & \\ 4y &= 40 \\ y &= 10 \end{aligned}$$



$$\begin{aligned} 5x + 7 &= 22 \\ 5x &= 15 \\ x &= 3 \end{aligned}$$

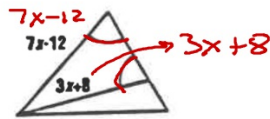
$$\begin{aligned} 8y - 2 &= 38 \\ 8y &= 40 \\ y &= 5 \end{aligned}$$

17. $x = \underline{\hspace{2cm}}$



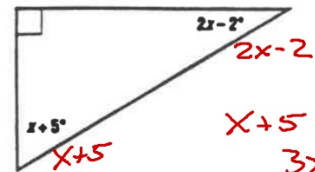
$$\begin{aligned} 2x + 5 &= 3x - 1 \\ 5 &= x - 1 \\ 6 &= x \end{aligned}$$

18. $x = \underline{\hspace{2cm}}$



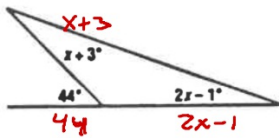
$$\begin{aligned} 7x - 12 &= 3x + 8 \\ 4x - 12 &= 8 \\ 4x &= 20 \\ x &= 5 \end{aligned}$$

19. $x = \underline{\hspace{2cm}}$



$$\begin{aligned} x + 5 + 2x - 2 &= 90 \\ 3x + 3 &= 90 \\ 3x &= 87 \\ x &= 29 \end{aligned}$$

20. $x = \underline{\hspace{2cm}}$



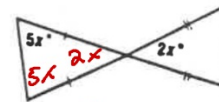
$$\begin{aligned} x + 3 + 2x - 1 &= 44 \\ 3x + 2 &= 44 \\ 3x &= 42 \\ x &= 14 \end{aligned}$$

21. $x = \underline{\hspace{2cm}}$



$$x = 29$$

22. $x = \underline{\hspace{2cm}}$



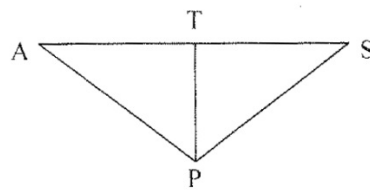
$$\begin{aligned} 5x + 5x + 2x &= 180 \\ 12x &= 180 \\ x &= 15 \end{aligned}$$

9. Given: $\overline{TP} \perp \overline{AS}$, $\overline{AP} \cong \overline{SP}$

Prove: $\triangle ATP \cong \triangle STP$

statements

1. $\overline{TP} \perp \overline{AS}$, $\overline{AP} \cong \overline{SP}$
2. $\angle ATP$ and $\angle STP$ are right angles
3. $\triangle ATP$ and $\triangle STP$ are right triangles
4. $\overline{TP} \cong \overline{TP}$
5. $\triangle ATP \cong \triangle STP$



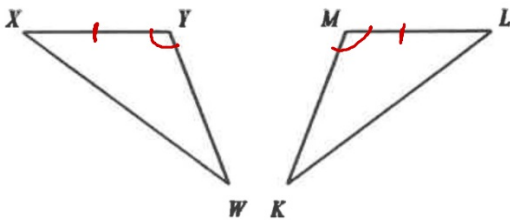
reasons

- 1.
- 2.
- 3.
- 4.
- 5.

Given: $m\angle XYW = (5x+25)^\circ$; $\overline{LM} = 2y+5$; $m\angle KML = 100^\circ$; $\overline{XY} = 13$

a. Find the value of x .

b. Find the value of y .



$$5x + 25 = 100$$

$$5x = 75$$

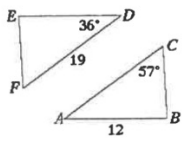
$$x = 15$$

$$2y + 5 = 13$$

$$2y = 8$$

$$y = 4$$

Use the figure below in which $\triangle ABC \cong \triangle DEF$. Find the given length or angle measure.

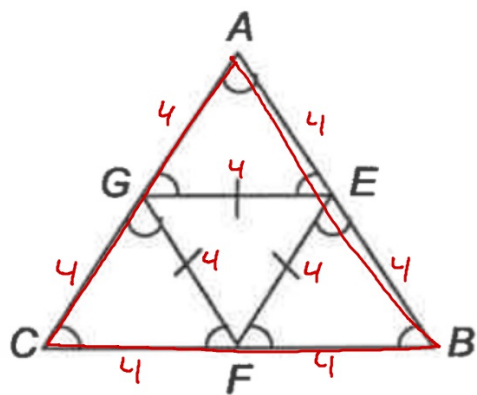


5. $DE = 12$

6. $m\angle A = 36$

7. $m\angle F = 57^\circ$

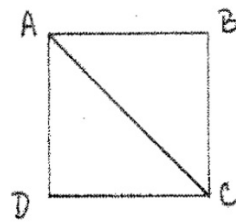
The measure of \overline{CG} is 4. What is the perimeter of $\triangle ABC$?



↓
24

12. Given: $\angle D$ and $\angle B$ are right angles, $\overline{AD} \cong \overline{CB}$

Prove: $\triangle ABC \cong \triangle CDA$



statements

reasons

1. $\angle D$ and $\angle B$ are right angles, $\overline{AD} \cong \overline{CB}$

1.

2. $\triangle ABC$ and $\triangle CDA$ are right triangles

2.

3.

3.

4. $\triangle ABC \cong \triangle CDA$

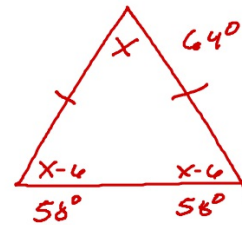
4.

The measure of each of the congruent angles of an isosceles triangle is 6 degrees less than the the measure of the vertex angle. Find the measure of each angle of the triangle.

$$3x - 12 = 180$$

$$3x = 192$$

$$x = 64$$



The measure of the vertex angle is an isosceles triangle is 15 degrees more than the measure of each base angle. Find the measure of each angle of the triangle.

$$3x + 15 = 180$$

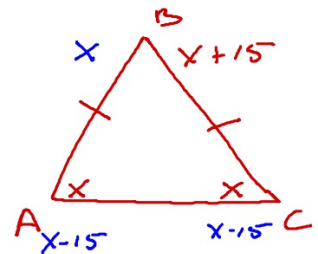
$$3x = 165$$

$$x = 55$$

$$\angle A = 55^\circ$$

$$\angle B = 55^\circ$$

$$\angle C = 70^\circ$$



D.3

Due Monday