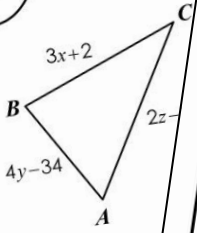
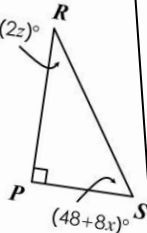


**1** Given  $\triangle ABC$  find the values of  $x$  and  $y$ .



A)  $x = 5, y = 12$   
 B)  $x = 7, y = 18$   
 C)  $x = 5, y = 18$   
 D)  $x = 7, y = 12$   
 E)  $x = 5, y = 12$

**4** Given  $\triangle RPS$  find the values of  $x$ ,  $y$ , and  $z$ .



A)  $x = 5, y = 12, z = 4$   
 B)  $x = 1, y = 18, z = 17$   
 C)  $x = 1, y = 18, z = 28$   
 D)  $x = 5, y = 9, z = 17$   
 E)  $x = 1, y = 9, z = 28$

**7** Given  $\triangle CRJ$  find the values of  $x$ ,  $y$ , and  $z$ .

If  $JG = 18, BG = 52, CR = 3z - 4,$  and  $RA = 3z - 4,$  find the values of  $x, y,$  and  $z$ .

A)  $x = 31, y = 17, z = 17$   
 B)  $x = 31, y = 27, z = 17$   
 C)  $x = 24, y = 17, z = 17$   
 D)  $x = 41, y = 34, z = 17$   
 E)  $x = 24, y = 34, z = 17$

**10** Given  $\triangle RED \cong \triangle BLU$ :  
 If  $RE = 13, ED = 19, RD = 22,$   
 $BU = 3z - 26, LU = -3x + 22,$   
 $m\angle D = 36^\circ, m\angle R = 60^\circ,$  and  
 $m\angle L = (4y - 60)^\circ,$  find the values of  $x, y,$  and  $z$ .

A)  $x = 1, y = 41, z = 16$  were hungry  
 B)  $x = 3, y = 36, z = 15$  wanted the spotlight  
 C)  $x = 13, y = 60, z = 13$  were dared to  
 D)  $x = 1, y = 36, z = 16$  lost a bet  
 E)  $x = 3, y = 60, z = 15$  are BFFs

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# Side & Angle Measures in CONGRUENT TRIANGLES

**MATH LIB ACTIVITY**



# Side & Angle Measures in CONGRUENT TRIANGLES

## Math Lib Activity

**Objective:** Students will practice finding sides lengths and angle measures of congruent triangles with this "Math Lib" Activity. Students must be able to match corresponding sides and angles, read and interpret congruency statements, and solve multi-step equations.

**Activity Directions:** Print and post the ten stations around the room. Give each student the worksheet to record their work as they travel to the stations. Group students (I typically do groups of 3) and assign to a starting problem. Set the timer for 3:30 minutes (more if needed). Students solve the problem at the station, then look for their answer and record the piece to the story. When the timer goes off, they move to the next station.

You can edit each slide to change the teacher's name and all story elements to personalize for your students. PowerPoint is required to edit the slides. They enjoy seeing which one of their teachers is the "star" of the story!

**Station 1:** Given  $\triangle ABC \cong \triangle T$ , find the values of  $x$ ,  $y$ , and  $z$ .  
 Side  $BC = 3x + 2$ , Side  $AC = 2z - 3$ , Side  $AB = 4y - 34$ .  
 A)  $x = 5, y = 11, z = 1$   
 B)  $x = 7, y = 5, z = 1$   
 C)  $x = 5, y = 11, z = 1$   
 D)  $x = 7, y = 5, z = 1$   
 E)  $x = 4, y = 17, z = 1$

**Station 4:** Given  $\triangle RPS \cong \triangle SQR$ , find the values of  $x$ ,  $y$ , and  $z$ .  
 Angle  $\angle R = (2z)^\circ$ , Angle  $\angle S = (48 + 8x)^\circ$ .  
 A)  $x = 5, y = 12, z = 45$   
 B)  $x = 1, y = 18, z = 17$   
 C)  $x = 1, y = 18, z = 28$   
 D)  $x = 5, y = 9, z = 17$   
 E)  $x = 1, y = 9, z = 28$

**Station 7:** Given  $\triangle CRJ \cong \triangle CRK$ , find the values of  $x$ ,  $y$ , and  $z$ .  
 If  $JG = 18, BG = 52, CR = 52, RA = 3z - 4$ , and  $\angle C = 90^\circ$ , find the values of  $x, y,$  and  $z$ .  
 A)  $x = 31, y = 17, z = 1$   
 B)  $x = 31, y = 27, z = 1$   
 C)  $x = 24, y = 17, z = 1$   
 D)  $x = 41, y = 34, z = 1$   
 E)  $x = 24, y = 34, z = 1$

**Station 10:** Given  $\triangle RED \cong \triangle BLU$ :  
 If  $RE = 13, ED = 19, RD = 22, BU = 3z - 26, LU = -3x + 22, m\angle D = 36^\circ, m\angle R = 60^\circ$ , and  $m\angle L = (4y - 60)^\circ$ , find the values of  $x, y,$  and  $z$ .  
 A)  $x = 1, y = 41, z = 16$  were hungry  
 B)  $x = 3, y = 36, z = 15$  wanted the spotlight  
 C)  $x = 13, y = 60, z = 13$  were dared to  
 D)  $x = 1, y = 36, z = 16$  lost a bet  
 E)  $x = 3, y = 60, z = 15$  are BFFs

**10 Stations & Student Worksheet Included**  
**You can change ALL story elements!**