

Name: _____

Date _____

Topic: Congruent Triangles - Worksheet 1

1. $\triangle ASD \cong \triangle PQR$ and the perimeter of $\triangle PQR$ is 320 cm. If the sum of two sides of $\triangle PQR$ is 220 cm, what is the length of the third side of $\triangle PQR$?
2. $\triangle CDE \cong \triangle VFR$ with $CD \cong VF$ and $CD = 14x - 4$. If $VF = 60$ cm, find the value of x ?
3. $\triangle ZAQ$ is congruent to $\triangle XSW$. If the sum of the measures of $\angle Z$ and $\angle Q$ is 135 degrees, what is the degree measure of $\angle S$?
4. $\triangle XYZ \cong \triangle ABC$ and the perimeter of $\triangle ABC$ is 75 cm. If the sum of two sides of $\triangle XYZ$ is 50 cm, what is the length of the third side of $\triangle ABC$?
5. $\triangle JKL \cong \triangle LMN$ with $JK \cong LM$ and $JK = 4x + 4$. If $LM = 52$ cm, find the value of x ?
6. $\triangle FGH$ is congruent to $\triangle BNM$. If the sum of the measures of $\angle F$ and $\angle H$ is 106 degrees, what is the degree measure of $\angle N$?
7. $\triangle ABC \cong \triangle XYZ$ and the perimeter of $\triangle XYZ$ is 62 cm. If the sum of two sides of $\triangle ABC$ is 48 cm, what is the length of the third side of $\triangle XYZ$?
8. $\triangle RST \cong \triangle ZXC$ with $\angle R \cong \angle Z$ and $\angle T \cong \angle C$. If $ZC = 46$ cm, which side of $\triangle RST$ has the same measure?
9. $\triangle PQR$ is congruent to $\triangle ABC$. If the sum of the measures of $\angle P$ and $\angle R$ is 20 degrees, what is the degree measure of $\angle B$?
10. $\triangle JKL \cong \triangle XYZ$ and the perimeter of $\triangle JKL$ is 440 cm. If the sum of two sides of $\triangle XYZ$ is 240 cm, what is the length of the third side of $\triangle JKL$?



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Topic: Congruent Triangles - Worksheet 2

1. $\triangle ASD \cong \triangle PQR$ and the perimeter of $\triangle PQR$ is 220 cm. If the sum of two sides of $\triangle PQR$ is 150 cm, what is the length of the third side of $\triangle PQR$?
2. $\triangle CDE \cong \triangle VFR$ with $CD \cong VF$ and $CD = 16X - 6$. If $VF = 80$ cm, find the value of x ?
3. $\triangle ZAQ$ is congruent to $\triangle XSW$. If the sum of the measures of $\angle Z$ and $\angle Q$ is 175 degrees, what is the degree measure of $\angle S$?
4. $\triangle XYZ \cong \triangle ABC$ and the perimeter of $\triangle ABC$ is 65 cm. If the sum of two sides of $\triangle XYZ$ is 40 cm, what is the length of the third side of $\triangle ABC$?
5. $\triangle JKL \cong \triangle LMN$ with $JK \cong LM$ and $JK = 2X + 2$. If $LM = 72$ cm, find the value of x ?
6. $\triangle FGH$ is congruent to $\triangle BNM$. If the sum of the measures of $\angle F$ and $\angle H$ is 108 degrees, what is the degree measure of $\angle N$?
7. $\triangle ABC \cong \triangle XYZ$ and the perimeter of $\triangle XYZ$ is 82 cm. If the sum of two sides of $\triangle ABC$ is 58 cm, what is the length of the third side of $\triangle XYZ$?
8. $\triangle RST \cong \triangle ZXC$ with $\angle R \cong \angle Z$ and $\angle T \cong \angle C$. If $ZC = 36$ cm, which side of $\triangle RST$ has the same measure?
9. $\triangle PQR$ is congruent to $\triangle ABC$. If the sum of the measures of $\angle P$ and $\angle R$ is 40 degrees, what is the degree measure of $\angle B$?
10. $\triangle JKL \cong \triangle XYZ$ and the perimeter of $\triangle JKL$ is 520 cm. If the sum of two sides of $\triangle XYZ$ is 360 cm, what is the length of the third side of $\triangle JKL$?



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Topic: Congruent Triangles - Worksheet 3

1. $\triangle ASD \cong \triangle PQR$ and the perimeter of $\triangle PQR$ is 410 cm. If the sum of two sides of $\triangle PQR$ is 230 cm, what is the length of the third side of $\triangle PQR$?
2. $\triangle CDE \cong \triangle VFR$ with $CD \cong VF$ and $CD = 18x - 2$. If $VF = 52$ cm, find the value of x ?
3. $\triangle ZAQ$ is congruent to $\triangle XSW$. If the sum of the measures of $\angle Z$ and $\angle Q$ is 125 degrees, what is the degree measure of $\angle S$?
4. $\triangle XYZ \cong \triangle ABC$ and the perimeter of $\triangle ABC$ is 55 cm. If the sum of two sides of $\triangle XYZ$ is 34 cm, what is the length of the third side of $\triangle ABC$?
5. $\triangle JKL \cong \triangle LMN$ with $JK \cong LM$ and $JK = 8x + 5$. If $LM = 45$ cm, find the value of x ?
6. $\triangle FGH$ is congruent to $\triangle BNM$. If the sum of the measures of $\angle F$ and $\angle H$ is 100 degrees, what is the degree measure of $\angle N$?
7. $\triangle ABC \cong \triangle XYZ$ and the perimeter of $\triangle XYZ$ is 72 cm. If the sum of two sides of $\triangle ABC$ is 38 cm, what is the length of the third side of $\triangle XYZ$?
8. $\triangle RST \cong \triangle ZXC$ with $\angle R \cong \angle Z$ and $\angle T \cong \angle C$. If $ZC = 56$ cm, which side of $\triangle RST$ has the same measure?
9. $\triangle PQR$ is congruent to $\triangle ABC$. If the sum of the measures of $\angle P$ and $\angle R$ is 60 degrees, what is the degree measure of $\angle B$?
10. $\triangle JKL \cong \triangle XYZ$ and the perimeter of $\triangle JKL$ is 610 cm. If the sum of two sides of $\triangle XYZ$ is 490 cm, what is the length of the third side of $\triangle JKL$?



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Topic: Congruent Triangles - Worksheet 4

1. $\triangle ASD \cong \triangle PQR$ and the perimeter of $\triangle PQR$ is 620 cm. If the sum of two sides of $\triangle PQR$ is 512 cm, what is the length of the third side of $\triangle PQR$?
2. $\triangle CDE \cong \triangle VFR$ with $CD \cong VF$ and $CD = 10x - 5$. If $VF = 55$ cm, find the value of x ?
3. $\triangle ZAQ$ is congruent to $\triangle XSW$. If the sum of the measures of $\angle Z$ and $\angle Q$ is 155 degrees, what is the degree measure of $\angle S$?
4. $\triangle XYZ \cong \triangle ABC$ and the perimeter of $\triangle ABC$ is 84 cm. If the sum of two sides of $\triangle XYZ$ is 34 cm, what is the length of the third side of $\triangle ABC$?
5. $\triangle JKL \cong \triangle LMN$ with $JK \cong LM$ and $JK = 7x + 3$. If $LM = 45$ cm, find the value of x ?
6. $\triangle FGH$ is congruent to $\triangle BNM$. If the sum of the measures of $\angle F$ and $\angle H$ is 110 degrees, what is the degree measure of $\angle N$?
7. $\triangle ABC \cong \triangle XYZ$ and the perimeter of $\triangle XYZ$ is 80 cm. If the sum of two sides of $\triangle ABC$ is 62 cm, what is the length of the third side of $\triangle XYZ$?
8. $\triangle ABD \cong \triangle ZXC$ with $\angle A \cong \angle Z$ and $\angle D \cong \angle C$. If $ZC = 72$ cm, which side of $\triangle ABD$ has the same measure?
9. $\triangle PQR$ is congruent to $\triangle ABC$. If the sum of the measures of $\angle P$ and $\angle R$ is 90 degrees, what is the degree measure of $\angle B$?
10. $\triangle JKL \cong \triangle XYZ$ and the perimeter of $\triangle JKL$ is 720 cm. If the sum of two sides of $\triangle XYZ$ is 560 cm, what is the length of the third side of $\triangle JKL$?



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Topic: Congruent Triangles - Worksheet 5

1. $\triangle ASD \cong \triangle PQR$ and the perimeter of $\triangle PQR$ is 840 cm. If the sum of two sides of $\triangle PQR$ is 490 cm, what is the length of the third side of $\triangle PQR$?
2. $\triangle CDE \cong \triangle VFR$ with $CD \cong VF$ and $CD = 15X - 6$. If $VF = 69$ cm, find the value of x ?
3. $\triangle ZAQ$ is congruent to $\triangle XSW$. If the sum of the measures of $\angle Z$ and $\angle Q$ is 145 degrees, what is the degree measure of $\angle S$?
4. $\triangle XYZ \cong \triangle ABC$ and the perimeter of $\triangle ABC$ is 94 cm. If the sum of two sides of $\triangle XYZ$ is 70 cm, what is the length of the third side of $\triangle ABC$?
5. $\triangle JKL \cong \triangle LMN$ with $JK \cong LM$ and $JK = 9X + 4$. If $LM = 58$ cm, find the value of x ?
6. $\triangle FGH$ is congruent to $\triangle BNM$. If the sum of the measures of $\angle F$ and $\angle H$ is 145 degrees, what is the degree measure of $\angle N$?
7. $\triangle ABC \cong \triangle XYZ$ and the perimeter of $\triangle XYZ$ is 71 cm. If the sum of two sides of $\triangle ABC$ is 34 cm, what is the length of the third side of $\triangle XYZ$?
8. $\triangle WUY \cong \triangle ZXC$ with $\angle W \cong \angle Z$ and $\angle Y \cong \angle C$. If $ZC = 60$ cm, which side of $\triangle RST$ has the same measure?
9. $\triangle PQR$ is congruent to $\triangle ABC$. If the sum of the measures of $\angle P$ and $\angle R$ is 135 degrees, what is the degree measure of $\angle B$?
10. $\triangle JKL \cong \triangle XYZ$ and the perimeter of $\triangle JKL$ is 800 cm. If the sum of two sides of $\triangle XYZ$ is 605 cm, what is the length of the third side of $\triangle JKL$?

