

Name: \_\_\_\_\_

Date \_\_\_\_\_

Topic: Area of Triangle Using Trigonometry - Worksheet 1

1. In  $\triangle XYZ$ ,  $XY = 18$ ,  $XZ = 12$ , and  $m\angle X = 80^\circ$ . Find the area of  $\triangle XYZ$ , to the nearest tenth of a square unit.
2. In an isosceles  $\triangle$ , the two equal sides each measure 20 meters, and they include an angle of  $35^\circ$ . Find the area of the isosceles triangle, to the nearest sq. meter.
3. In  $\triangle PQR$ ,  $PQ = 9$  meters and  $PR = 12$  meters. If the area of the triangle is 32 sq. meters, find the measure of  $\angle P$  to the nearest degree.
4. In a rhombus, each side is 15, and one angle is  $92^\circ$ . Find the area of the rhombus, to the nearest square unit.
5. In  $\triangle JKL$ ,  $JK = 28$ ,  $JL = 13$ , and  $m\angle J = 67^\circ$ . Find the area of  $\triangle JKL$ , to the nearest tenth of a square unit.
6. In an isosceles  $\triangle$ , the two equal sides each measure 30 meters, and they include an angle of  $80^\circ$ . Find the area of the isosceles triangle, to the nearest sq. meter.
7. In  $\triangle RST$ ,  $RS = 36$  meters and  $RT = 26$  meters. If the area of the triangle is 90 sq. meters, find the measure of  $\angle R$  to the nearest degree.
8. In a rhombus, each side is 22, and one angle is  $125^\circ$ . Find the area of the rhombus, to the nearest square unit.
9. In  $\triangle LMN$ ,  $LM = 20$ ,  $LN = 15$ , and  $m\angle L = 60^\circ$ . Find the area of  $\triangle LMN$ , to the nearest tenth of a square unit.
10. In an isosceles  $\triangle$ , the two equal sides each measure 28 meters, and they include an angle of  $40^\circ$ . Find the area of the isosceles triangle, to the nearest sq. meter.



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Topic: Area of Triangle Using Trigonometry - Worksheet 2

1. In  $\triangle XYZ$ ,  $XY = 25$ ,  $XZ = 32$ , and  $m\angle X = 70^\circ$ . Find the area of  $\triangle XYZ$ , to the nearest tenth of a square unit.
2. In an isosceles  $\triangle$ , the two equal sides each measure 12 meters, and they include an angle of  $40^\circ$ . Find the area of the isosceles triangle, to the nearest sq. meter.
3. In  $\triangle PQR$ ,  $PQ = 7$  meters and  $PR = 15$  meters. If the area of the triangle is 28 sq. meters, find the measure of  $\angle P$  to the nearest degree.
4. In a rhombus, each side is 18, and one angle is  $82^\circ$ . Find the area of the rhombus, to the nearest square unit.
5. In  $\triangle JKL$ ,  $JK = 25$ ,  $JL = 14$ , and  $m\angle J = 61^\circ$ . Find the area of  $\triangle JKL$ , to the nearest tenth of a square unit.
6. In an isosceles  $\triangle$ , the two equal sides each measure 25 meters, and they include an angle of  $70^\circ$ . Find the area of the isosceles triangle, to the nearest sq. meter.
7. In  $\triangle RST$ ,  $RS = 45$  meters and  $RT = 25$  meters. If the area of the triangle is 85 sq. meters, find the measure of  $\angle R$  to the nearest degree.
8. In a rhombus, each side is 19, and one angle is  $120^\circ$ . Find the area of the rhombus, to the nearest square unit.
9. In  $\triangle LMN$ ,  $LM = 21$ ,  $LN = 11$ , and  $m\angle L = 51^\circ$ . Find the area of  $\triangle LMN$ , to the nearest tenth of a square unit.
10. In an isosceles  $\triangle$ , the two equal sides each measure 32 meters, and they include an angle of  $50^\circ$ . Find the area of the isosceles triangle, to the nearest sq. meter.



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Topic: Area of Triangle Using Trigonometry - Worksheet 3

1. In  $\triangle XYZ$ ,  $XY = 32$ ,  $XZ = 17$ , and  $m\angle X = 60^\circ$ . Find the area of  $\triangle XYZ$ , to the nearest tenth of a square unit.
2. In an isosceles  $\triangle$ , the two equal sides each measure 16 meters, and they include an angle of  $39^\circ$ . Find the area of the isosceles triangle, to the nearest sq. meter.
3. In  $\triangle PQR$ ,  $PQ = 7$  meters and  $PR = 16$  meters. If the area of the triangle is 28 sq. meters, find the measure of  $\angle P$  to the nearest degree.
4. In a rhombus, each side is 27, and one angle is  $79^\circ$ . Find the area of the rhombus, to the nearest square unit.
5. In  $\triangle JKL$ ,  $JK = 36$ ,  $JL = 15$ , and  $m\angle J = 66^\circ$ . Find the area of  $\triangle JKL$ , to the nearest tenth of a square unit.
6. In an isosceles  $\triangle$ , the two equal sides each measure 34 meters, and they include an angle of  $78^\circ$ . Find the area of the isosceles triangle, to the nearest sq. meter.
7. In  $\triangle RST$ ,  $RS = 47$  meters and  $RT = 24$  meters. If the area of the triangle is 95 sq. meters, find the measure of  $\angle R$  to the nearest degree.
8. In a rhombus, each side is 23, and one angle is  $115^\circ$ . Find the area of the rhombus, to the nearest square unit.
9. In  $\triangle LMN$ ,  $LM = 36$ ,  $LN = 8$ , and  $m\angle L = 65^\circ$ . Find the area of  $\triangle LMN$ , to the nearest tenth of a square unit.
10. In an isosceles  $\triangle$ , the two equal sides each measure 45 meters, and they include an angle of  $64^\circ$ . Find the area of the isosceles triangle, to the nearest sq. meter.



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Topic: Area of Triangle Using Trigonometry - Worksheet 4

1. In  $\triangle XYZ$ ,  $XY = 17$ ,  $XZ = 26$ , and  $m\angle X = 87^\circ$ . Find the area of  $\triangle XYZ$ , to the nearest tenth of a square unit.
2. In an isosceles  $\triangle$ , the two equal sides each measure 19 meters, and they include an angle of  $53^\circ$ . Find the area of the isosceles triangle, to the nearest sq. meter.
3. In  $\triangle PQR$ ,  $PQ = 12$  meters and  $PR = 27$  meters. If the area of the triangle is 84 sq. meters, find the measure of  $\angle P$  to the nearest degree.
4. In a rhombus, each side is 14, and one angle is  $94^\circ$ . Find the area of the rhombus, to the nearest square unit.
5. In  $\triangle JKL$ ,  $JK = 32$ ,  $JL = 24$ , and  $m\angle J = 82^\circ$ . Find the area of  $\triangle JKL$ , to the nearest tenth of a square unit.
6. In an isosceles  $\triangle$ , the two equal sides each measure 45 meters, and they include an angle of  $125^\circ$ . Find the area of the isosceles triangle, to the nearest sq. meter.
7. In  $\triangle RST$ ,  $RS = 87$  meters and  $RT = 36$  meters. If the area of the triangle is 95 sq. meters, find the measure of  $\angle R$  to the nearest degree.
8. In a rhombus, each side is 74, and one angle is  $135^\circ$ . Find the area of the rhombus, to the nearest square unit.
9. In  $\triangle LMN$ ,  $LM = 12$ ,  $LN = 19$ , and  $m\angle L = 69^\circ$ . Find the area of  $\triangle LMN$ , to the nearest tenth of a square unit.
10. In an isosceles  $\triangle$ , the two equal sides each measure 29 meters, and they include an angle of  $78^\circ$ . Find the area of the isosceles triangle, to the nearest sq. meter.



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Topic: Area of Triangle Using Trigonometry - Worksheet 5

1. In  $\triangle XYZ$ ,  $XY = 14$ ,  $XZ = 33$ , and  $m\angle X = 88^\circ$ . Find the area of  $\triangle XYZ$ , to the nearest tenth of a square unit.
2. In an isosceles  $\triangle$ , the two equal sides each measure 21 meters, and they include an angle of  $59^\circ$ . Find the area of the isosceles triangle, to the nearest sq. meter.
3. In  $\triangle PQR$ ,  $PQ = 22$  meters and  $PR = 31$  meters. If the area of the triangle is 111 sq. meters, find the measure of  $\angle P$  to the nearest degree.
4. In a rhombus, each side is 25, and one angle is  $105^\circ$ . Find the area of the rhombus, to the nearest square unit.
5. In  $\triangle JKL$ ,  $JK = 54$ ,  $JL = 63$ , and  $m\angle J = 142^\circ$ . Find the area of  $\triangle JKL$ , to the nearest tenth of a square unit.
6. In an isosceles  $\triangle$ , the two equal sides each measure 71 meters, and they include an angle of  $114^\circ$ . Find the area of the isosceles triangle, to the nearest sq. meter.
7. In  $\triangle RST$ ,  $RS = 16$  meters and  $RT = 18$  meters. If the area of the triangle is 100 sq. meters, find the measure of  $\angle R$  to the nearest degree.
8. In a rhombus, each side is 48, and one angle is  $97^\circ$ . Find the area of the rhombus, to the nearest square unit.
9. In  $\triangle LMN$ ,  $LM = 13$ ,  $LN = 21$ , and  $m\angle L = 78^\circ$ . Find the area of  $\triangle LMN$ , to the nearest tenth of a square unit.
10. In an isosceles  $\triangle$ , the two equal sides each measure 36 meters, and they include an angle of  $120^\circ$ . Find the area of the isosceles triangle, to the nearest sq. meter.

