

Sine and Cosine Rule Practice Worksheet

This worksheet includes 20 questions:

- 10 on the Sine Rule
- 10 on the Cosine Rule

Construct the figures after reading the questions and then solve them numerically. Answers are provided at the end.

Part A: Sine Rule

1. In triangle ABC, angle A = 30° , angle B = 45° , and side a = 10 cm. Find side b.
2. In triangle XYZ, angle X = 50° , angle Z = 65° , and side x = 12 cm. Find side z.
3. In triangle PQR, angle P = 40° , angle Q = 60° , and side p = 8 cm. Find side q.
4. In triangle ABC, angle A = 60° , angle C = 45° , and side a = 15 cm. Find side c.
5. In triangle XYZ, angle Y = 70° , angle Z = 50° , and side y = 14 cm. Find side z.
6. In triangle PQR, angle Q = 55° , angle R = 65° , and side q = 13 cm. Find side r.
7. In triangle ABC, angle B = 80° , angle C = 50° , and side b = 9 cm. Find side c.
8. In triangle XYZ, angle X = 45° , angle Y = 65° , and side x = 11 cm. Find side y.
9. In triangle PQR, angle P = 35° , angle R = 75° , and side p = 10 cm. Find side r.
10. In triangle ABC, angle A = 40° , angle B = 60° , and side a = 7 cm. Find side b.

Part B: Cosine Rule

1. In triangle ABC, side a = 7 cm, side b = 10 cm, angle C = 60° . Find side c.
2. In triangle XYZ, side x = 6 cm, side y = 8 cm, angle Z = 45° . Find side z.
3. In triangle PQR, side p = 5 cm, side q = 9 cm, angle R = 70° . Find side r.
4. In triangle ABC, side b = 10 cm, side c = 12 cm, angle A = 50° . Find side a.
5. In triangle XYZ, side y = 9 cm, side z = 11 cm, angle X = 55° . Find side x.
6. In triangle PQR, side p = 6 cm, side r = 7 cm, angle Q = 65° . Find side q.
7. In triangle ABC, side a = 8 cm, side c = 10 cm, angle B = 40° . Find side b.
8. In triangle XYZ, side x = 5 cm, side z = 9 cm, angle Y = 60° . Find side y.
9. In triangle PQR, side q = 7 cm, side r = 11 cm, angle P = 75° . Find side p.
10. In triangle ABC, side a = 9 cm, side b = 10 cm, angle C = 70° . Find side c.

Answer Key

Sine Rule Answers:

1. $b = 14.14$ cm
2. $z = 14.47$ cm
3. $q = 10.26$ cm
4. $c = 11.34$ cm
5. $z = 11.45$ cm
6. $r = 11.84$ cm
7. $c = 7.24$ cm
8. $y = 15.07$ cm
9. $r = 16.03$ cm
10. $b = 10.03$ cm

Cosine Rule Answers:

1. $c = 8.89$ cm
2. $z = 5.66$ cm
3. $r = 8.67$ cm
4. $a = 9.65$ cm
5. $x = 10.58$ cm
6. $q = 7.31$ cm
7. $b = 6.75$ cm
8. $y = 7.67$ cm
9. $p = 10.28$ cm
10. $c = 9.75$ cm