

## Sine Law

Date \_\_\_\_\_

**Solve each triangle. Round your answers to the nearest tenth.**

- 1) In  $\triangle PKH$ ,  $m\angle H = 77^\circ$ ,  $h = 20$  cm,  $k = 15$  cm
- 2) In  $\triangle QRP$ ,  $m\angle Q = 137^\circ$ ,  $p = 8$  mi,  $q = 14$  mi
- 3) In  $\triangle TRS$ ,  $m\angle T = 130^\circ$ ,  $s = 29$  in,  $t = 49$  in
- 4) In  $\triangle RST$ ,  $m\angle R = 94^\circ$ ,  $t = 17$  ft,  $r = 32$  ft
- 5) In  $\triangle XYZ$ ,  $m\angle Y = 67^\circ$ ,  $x = 10$  in,  $y = 16$  in
- 6) In  $\triangle ZXY$ ,  $m\angle Z = 133^\circ$ ,  $y = 11$  cm,  $z = 14$  cm
- 7) In  $\triangle ZXY$ ,  $m\angle Z = 20^\circ$ ,  $m\angle Y = 41^\circ$ ,  $y = 21$  ft
- 8) In  $\triangle HPK$ ,  $m\angle H = 88^\circ$ ,  $m\angle K = 62^\circ$ ,  $k = 23$  cm
- 9) In  $\triangle BCA$ ,  $m\angle B = 115^\circ$ ,  $m\angle A = 38^\circ$ ,  $c = 14$  in
- 10) In  $\triangle STR$ ,  $m\angle S = 48^\circ$ ,  $m\angle R = 78^\circ$ ,  $r = 29$  cm
- 11) In  $\triangle BCA$ ,  $m\angle B = 33^\circ$ ,  $m\angle A = 128^\circ$ ,  $c = 12$  ft
- 12) In  $\triangle RPQ$ ,  $m\angle R = 78^\circ$ ,  $m\angle Q = 53^\circ$ ,  $q = 18$  mi
- 13) In  $\triangle DEF$ ,  $m\angle E = 35^\circ$ ,  $m\angle F = 98^\circ$ ,  $e = 11$  ft
- 14) In  $\triangle XYZ$ ,  $m\angle Y = 31^\circ$ ,  $m\angle Z = 122^\circ$ ,  $y = 17$  in
- 15) In  $\triangle TRS$ ,  $m\angle R = 39^\circ$ ,  $m\angle S = 45^\circ$ ,  $t = 38$  cm
- 16) In  $\triangle STR$ ,  $m\angle S = 36^\circ$ ,  $r = 14$  yd,  $s = 16$  yd
- 17) In  $\triangle QRP$ ,  $m\angle Q = 96^\circ$ ,  $m\angle R = 73^\circ$ ,  $q = 26$  yd
- 18) In  $\triangle RPQ$ ,  $m\angle R = 126^\circ$ ,  $m\angle P = 10^\circ$ ,  $r = 28$  ft
- 19) In  $\triangle RPQ$ ,  $m\angle Q = 31^\circ$ ,  $q = 23$  km,  $p = 10$  km
- 20) In  $\triangle RST$ ,  $m\angle R = 37^\circ$ ,  $m\angle T = 45^\circ$ ,  $t = 20$  yd

## Answers to Sine Law (ID: 1)

- 1)  $m\angle P = 56^\circ$ ,  $m\angle K = 47^\circ$ ,  $p = 17$  cm
- 2)  $m\angle R = 20.1^\circ$ ,  $m\angle P = 22.9^\circ$ ,  $r = 7.1$  mi
- 3)  $m\angle R = 23^\circ$ ,  $m\angle S = 27^\circ$ ,  $r = 25$  in
- 4)  $m\angle S = 54^\circ$ ,  $m\angle T = 32^\circ$ ,  $s = 26$  ft
- 5)  $m\angle X = 35.1^\circ$ ,  $m\angle Z = 77.9^\circ$ ,  $z = 17$  in
- 6)  $m\angle X = 11.9^\circ$ ,  $m\angle Y = 35.1^\circ$ ,  $x = 3.9$  cm
- 7)  $m\angle X = 119^\circ$ ,  $z = 10.9$  ft,  $x = 28$  ft
- 8)  $m\angle P = 30^\circ$ ,  $h = 26$  cm,  $p = 13$  cm
- 9)  $m\angle C = 27^\circ$ ,  $a = 19$  in,  $b = 27.9$  in
- 10)  $m\angle T = 54^\circ$ ,  $s = 22$  cm,  $t = 24$  cm
- 11)  $m\angle C = 19^\circ$ ,  $a = 29$  ft,  $b = 20.1$  ft
- 12)  $m\angle P = 49^\circ$ ,  $r = 22$  mi,  $p = 17$  mi
- 13)  $m\angle D = 47^\circ$ ,  $f = 19$  ft,  $d = 14$  ft
- 14)  $m\angle X = 27^\circ$ ,  $z = 28$  in,  $x = 15$  in
- 15)  $m\angle T = 96^\circ$ ,  $s = 27$  cm,  $r = 24$  cm
- 16)  $m\angle T = 113^\circ$ ,  $m\angle R = 31^\circ$ ,  $t = 25.1$  yd
- 17)  $m\angle P = 11^\circ$ ,  $p = 5$  yd,  $r = 25$  yd
- 18)  $m\angle Q = 44^\circ$ ,  $q = 24$  ft,  $p = 6$  ft
- 19)  $m\angle R = 136.1^\circ$ ,  $m\angle P = 12.9^\circ$ ,  $r = 31$  km
- 20)  $m\angle S = 98^\circ$ ,  $r = 17$  yd,  $s = 28$  yd

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- 3) In  $\triangle TRS$ ,  $m\angle T = 130^\circ$ ,  $s = 29$  in,  $t = 49$  in
- 4) In  $\triangle RST$ ,  $m\angle R = 94^\circ$ ,  $t = 17$  ft,  $r = 32$  ft
- 5) In  $\triangle XYZ$ ,  $m\angle Y = 67^\circ$ ,  $x = 10$  in,  $y = 16$  in
- 6) In  $\triangle ZXY$ ,  $m\angle Z = 133^\circ$ ,  $y = 11$  cm,  $z = 14$  cm
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- 10) In  $\triangle STR$ ,  $m\angle S = 48^\circ$ ,  $m\angle R = 78^\circ$ ,  $r = 29$  cm
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- 12) In  $\triangle RPQ$ ,  $m\angle R = 78^\circ$ ,  $m\angle Q = 53^\circ$ ,  $q = 18$  mi
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- 19) In  $\triangle RPQ$ ,  $m\angle Q = 31^\circ$ ,  $q = 23$  km,  $p = 10$  km
- 20) In  $\triangle RST$ ,  $m\angle R = 37^\circ$ ,  $m\angle T = 45^\circ$ ,  $t = 20$  yd

## Answers to Sine Law (ID: 2)

- 1)  $m\angle P = 56^\circ$ ,  $m\angle K = 47^\circ$ ,  $p = 17$  cm
- 2)  $m\angle R = 20.1^\circ$ ,  $m\angle P = 22.9^\circ$ ,  $r = 7.1$  mi
- 3)  $m\angle R = 23^\circ$ ,  $m\angle S = 27^\circ$ ,  $r = 25$  in
- 4)  $m\angle S = 54^\circ$ ,  $m\angle T = 32^\circ$ ,  $s = 26$  ft
- 5)  $m\angle X = 35.1^\circ$ ,  $m\angle Z = 77.9^\circ$ ,  $z = 17$  in
- 6)  $m\angle X = 11.9^\circ$ ,  $m\angle Y = 35.1^\circ$ ,  $x = 3.9$  cm
- 7)  $m\angle X = 119^\circ$ ,  $z = 10.9$  ft,  $x = 28$  ft
- 8)  $m\angle P = 30^\circ$ ,  $h = 26$  cm,  $p = 13$  cm
- 9)  $m\angle C = 27^\circ$ ,  $a = 19$  in,  $b = 27.9$  in
- 10)  $m\angle T = 54^\circ$ ,  $s = 22$  cm,  $t = 24$  cm
- 11)  $m\angle C = 19^\circ$ ,  $a = 29$  ft,  $b = 20.1$  ft
- 12)  $m\angle P = 49^\circ$ ,  $r = 22$  mi,  $p = 17$  mi
- 13)  $m\angle D = 47^\circ$ ,  $f = 19$  ft,  $d = 14$  ft
- 14)  $m\angle X = 27^\circ$ ,  $z = 28$  in,  $x = 15$  in
- 15)  $m\angle T = 96^\circ$ ,  $s = 27$  cm,  $r = 24$  cm
- 16)  $m\angle T = 113^\circ$ ,  $m\angle R = 31^\circ$ ,  $t = 25.1$  yd
- 17)  $m\angle P = 11^\circ$ ,  $p = 5$  yd,  $r = 25$  yd
- 18)  $m\angle Q = 44^\circ$ ,  $q = 24$  ft,  $p = 6$  ft
- 19)  $m\angle R = 136.1^\circ$ ,  $m\angle P = 12.9^\circ$ ,  $r = 31$  km
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## Answers to Sine Law (ID: 3)

- 1)  $m\angle P = 56^\circ$ ,  $m\angle K = 47^\circ$ ,  $p = 17$  cm
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