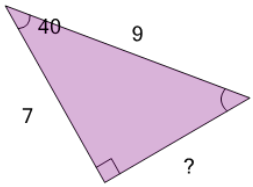
Math worksheet on *'Trigonometry - Rule of Cosines - Setup (Level 1)'*. Part of a broader unit on *'Trigonometry - Solving Triangles'*

Learn online: app.mobius.academy/math/units/trigonometry_solving_triangles/

1 Select the right formula to calculate the side length indicated



a $\sqrt{9^2 + 9^2 - 2 \cdot 9 \cdot 9 \cdot cos(7)}$

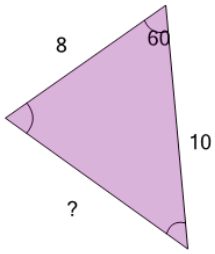
b $\sqrt{9^2 + 80^2 - 2 \cdot 9 \cdot 80 \cdot cos(40)}$

c $\sqrt{9^2 + 7^2 - 2 \cdot 9 \cdot 7 \cdot cos(9)}$

d $\sqrt{9^2 + 7^2 - 2 \cdot 9 \cdot 7 \cdot cos(40)}$

e $\sqrt{9^2 + 40^2 - 2 \cdot 9 \cdot 40 \cdot cos(7)}$

2 Select the right formula to calculate the side length indicated



a $\sqrt{10^2 + 120^2 - 2 \cdot 10 \cdot 120 \cdot cos(60)}$

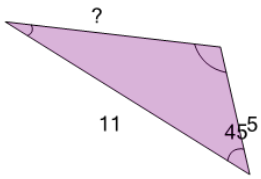
b $\sqrt{10^2 + 8^2 - 2 \cdot 10 \cdot 8 \cdot cos(60)}$

c $\sqrt{10^2 + 60^2 - 2 \cdot 10 \cdot 60 \cdot cos(8)}$

d $\sqrt{10^2 + 8^2 - 2 \cdot 10 \cdot 8 \cdot cos(10)}$

e $\sqrt{10^2 + 10^2 - 2 \cdot 10 \cdot 10 \cdot cos(8)}$

3 Select the right formula to calculate the side length indicated



a $\sqrt{11^2 + 5^2 - 2 \cdot 11 \cdot 5 \cdot cos(11)}$

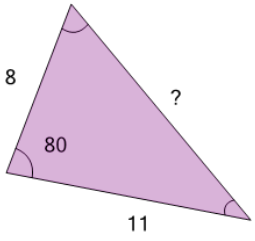
b $\sqrt{11^2 + 45^2 - 2 \cdot 11 \cdot 45 \cdot cos(5)}$

c $\sqrt{11^2 + 5^2 - 2 \cdot 11 \cdot 5 \cdot cos(45)}$

d $\sqrt{11^2 + 11^2 - 2 \cdot 11 \cdot 11 \cdot cos(5)}$

e $\sqrt{11^2 + 90^2 - 2 \cdot 11 \cdot 90 \cdot cos(45)}$

4 Select the right formula to calculate the side length indicated



a $\sqrt{8^2 + 80^2 - 2 \cdot 8 \cdot 80 \cdot cos(11)}$

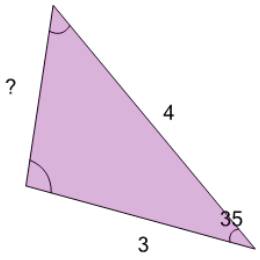
b $\sqrt{8^2 + 11^2 - 2 \cdot 8 \cdot 11 \cdot cos(80)}$

c $\sqrt{8^2 + 11^2 - 2 \cdot 8 \cdot 11 \cdot cos(8)}$

d $\sqrt{8^2 + 8^2 - 2 \cdot 8 \cdot 8 \cdot cos(11)}$

e $\sqrt{8^2 + 160^2 - 2 \cdot 8 \cdot 160 \cdot cos(80)}$

5 Select the right formula to calculate the side length indicated



a $\sqrt{3^2 + 3^2 - 2 \cdot 3 \cdot 3 \cdot cos(4)}$

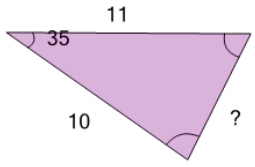
b $\sqrt{3^2 + 70^2 - 2 \cdot 3 \cdot 70 \cdot cos(35)}$

c $\sqrt{3^2 + 35^2 - 2 \cdot 3 \cdot 35 \cdot cos(4)}$

d $\sqrt{3^2 + 4^2 - 2 \cdot 3 \cdot 4 \cdot cos(3)}$

e $\sqrt{3^2 + 4^2 - 2 \cdot 3 \cdot 4 \cdot cos(35)}$

6 Select the right formula to calculate the side length indicated



a $\sqrt{11^2 + 10^2 - 2 \cdot 11 \cdot 10 \cdot cos(35)}$

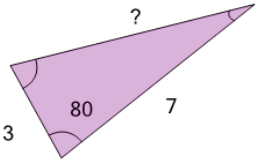
b $\sqrt{11^2 + 11^2 - 2 \cdot 11 \cdot 11 \cdot cos(10)}$

c $\sqrt{11^2 + 10^2 - 2 \cdot 11 \cdot 10 \cdot cos(11)}$

d $\sqrt{11^2 + 35^2 - 2 \cdot 11 \cdot 35 \cdot cos(10)}$

e $\sqrt{11^2 + 70^2 - 2 \cdot 11 \cdot 70 \cdot cos(35)}$

7 Select the right formula to calculate the side length indicated



a $\sqrt{3^2 + 160^2 - 2 \cdot 3 \cdot 160 \cdot cos(80)}$

b $\sqrt{3^2 + 7^2 - 2 \cdot 3 \cdot 7 \cdot cos(3)}$

c $\sqrt{3^2 + 80^2 - 2 \cdot 3 \cdot 80 \cdot cos(7)}$

d $\sqrt{3^2 + 3^2 - 2 \cdot 3 \cdot 3 \cdot cos(7)}$

e $\sqrt{3^2 + 7^2 - 2 \cdot 3 \cdot 7 \cdot cos(80)}$