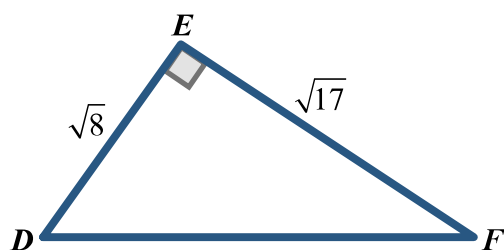


USING TRIG RATIOS (SAMPLE RESPONSES)

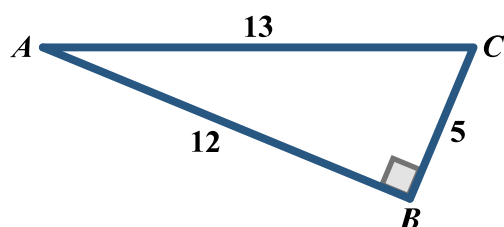
- 1) In $\triangle DEF$ shown below, $\overline{DE} = \sqrt{8} \text{ cm}$ and $\overline{EF} = \sqrt{17} \text{ cm}$. What is $\cos(F)$?



$$\overline{DF} = \sqrt{(\sqrt{8})^2 + (\sqrt{17})^2} = 5$$

$$\cos(F) = \frac{\sqrt{17}}{5}$$

- 2) The lengths of 3 sides of a right triangle $\triangle ABC$, which is shown below, are all given in feet.



Which ratio has the value of $\frac{12}{13}$?

(a) $\sin(A)$

(b) $\sin(C)$

(c) $\cos(B)$

(d) $\cos(C)$

(e) $\tan(A)$

(f) $\tan(C)$

- 3) For an angle with measure θ in a right triangle, $\sin \theta = \frac{\sqrt{15}}{8}$ and $\cos \theta = \frac{7}{8}$. What is the value of $\tan \theta$?

sketch a triangle

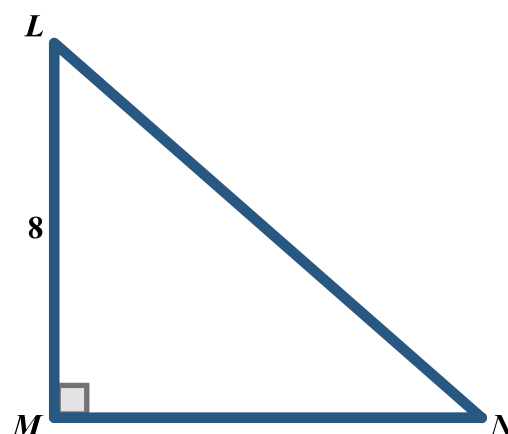
opposite = $\sqrt{15}$

adjacent = 7

hypotenuse = 8

$$\tan \theta = \frac{\sqrt{15}}{7}$$

- 4) In $\triangle LMN$ shown below, the length of $\overline{LM}$ is 8 inches and $\sin(N) = \frac{2}{3}$. What is the length, in inches, of $\overline{LN}$?



$$\sin(N) = \frac{2}{3} = \frac{8}{\overline{LN}}$$

$$\Rightarrow \overline{LN} = 12$$