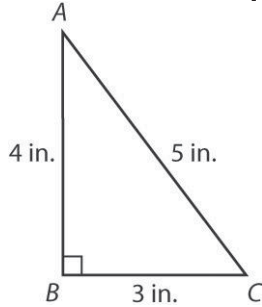


Module 13/14 Review

Use triangle ABC to answer questions 1-2



1. Which side is opposite $\angle A$

BC or 3 in

2. What is $\tan C$?

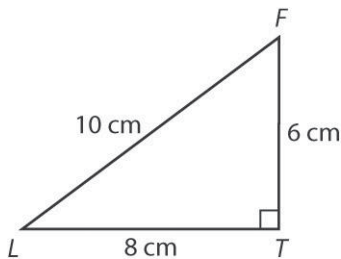
A $\frac{5}{3}$

C $\frac{3}{4}$

C. $\frac{4}{3}$

D $\frac{3}{5}$

Use triangle LTF to answer questions 3-7.



3. What is $\sin F$? $\frac{8}{10} = \frac{4}{5}$

4. What is $\cos F$? $\frac{6}{10} = \frac{3}{5}$

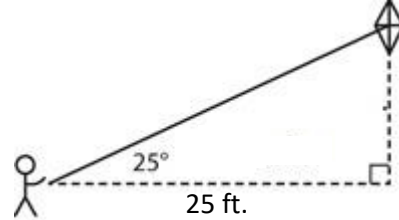
5. What is $\tan F$? $\frac{8}{6} = \frac{4}{3}$

6. What is the measure of angle L , to the nearest degree? **37°**

7. How else could you find angle L ? **inverse sine, cosine, or tan (whatever you didn't do on #6)**

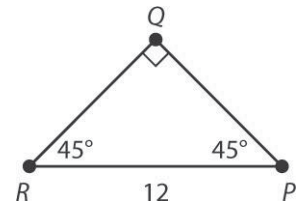
Name _____

8. Raul is standing 25 feet away from the bottom of the kite. Raul is holding the string 3 feet off the ground at the angle to the horizontal as shown.



How high is the kite off the ground? Round your answer to the nearest tenth. Explain your reasoning. **14.7 ft.**

$\triangle PQR$ is shown.



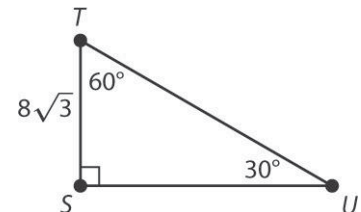
9. What are the missing side lengths in $\triangle PQR$? Leave your answers in simplest radical form (no decimals).

Both are $6\sqrt{2}$

10. Given that $\cos 42^\circ \approx 0.743$, what is the sine of the complementary angle?

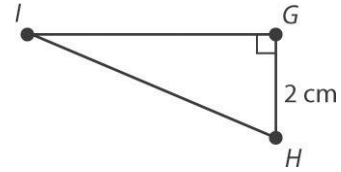
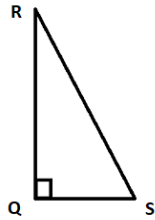
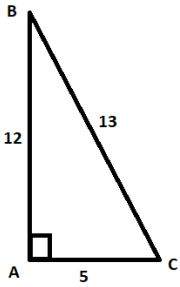
$\sin 48^\circ \approx 0.743$

$\triangle TSU$ is shown.



11. What are the missing side lengths in $\triangle TSU$? Explain. Keep your answer in simplest radical form. **$SU = 24, TU = 16\sqrt{3}$**

Use the figures for 12-14.



16. If $m\angle H = 68^\circ$, find GI . $GI \approx 5 \text{ cm}$

12. Fill in the missing side lengths for each trigonometric ratio.

$$\sin C = \frac{12}{13} \quad \sin B = \frac{5}{13} \quad \cos C = \frac{5}{13}$$

$$\cos B = \frac{12}{13} \quad \tan C = \frac{12}{5} \quad \tan B = \frac{5}{12}$$

13. Triangle ABC is similar to triangle QRS. Select all angles whose cosine equals $\frac{12}{13}$.
Angles B and R

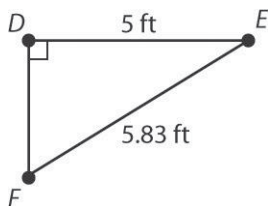
14. How are the sine, cosine, and tangent related in triangles ABC and QRS? Fill in the blanks with $>$, $<$, or $=$.

a. $\sin C \underline{=} \sin S$

b. $\cos B \underline{>} \sin R$

c. $\tan C \underline{=} \tan S$

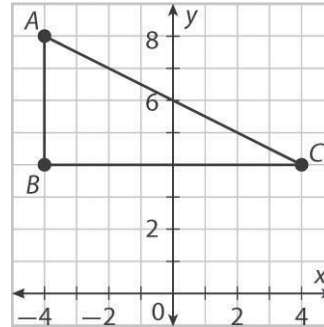
15. Solve the triangle by finding the lengths of all the sides and the measures of all the angles. Show your reasoning.



$DF \approx 3$
 $m\angle E \approx 31^\circ$
 $m\angle F \approx 59^\circ$

A right triangle is shown.

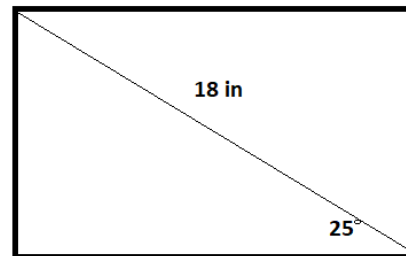
Use the figure for 17-18.



17. $\angle B$ is a right angle. What is AC in simplest radical form? $4\sqrt{5}$

18. What is $m\angle A$? 63°

19. What are the horizontal and vertical lengths of the rectangle shown?



Horizontal $\approx 16.3 \text{ in}$

Vertical $\approx 7.6 \text{ in}$

20. What is the area of $\triangle ABC$? 7.05 cm^2

