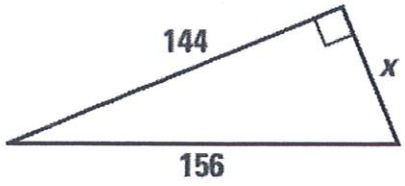
Chapter 7 Questions

50) Find the unknown side length in the right triangle using the Pythagorean Theorem.



$144^2 + x^2 = 156^2$

$20736 + x^2 = 24336$

$x^2 = 3600$

$x = 60$

Decide if the segments form a triangle. If so, would the triangle be *acute*, *right* or *obtuse*?

51) 14, 21, 25

$14+21 > 25 \Rightarrow$ Yes

$25^2 \stackrel{?}{} 14^2 + 21^2$

$625 < 637$

Acute

52) 32, 60, 68

$32+60 > 68 \Rightarrow$ Yes

$68^2 \stackrel{?}{} 32^2 + 60^2$

$4624 = 4624$

Right

53) 11, 19, 32

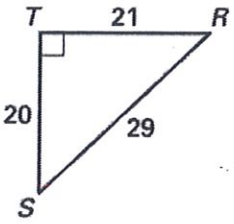
$11+19 = 30 < 32 \Rightarrow$ No

Use trigonometric ratios to write the given ratio as a decimal AND fraction in simplest form.

59) Tan R= $\frac{20}{21} \approx 0.9524$

Sin R = $\frac{20}{29} \approx 0.6897$

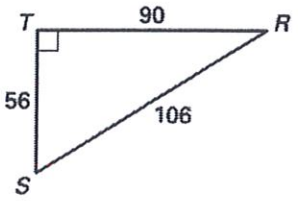
Cos R = $\frac{21}{29} \approx 0.7241$



60) Tan R= $\frac{56}{90} \approx 0.6222$

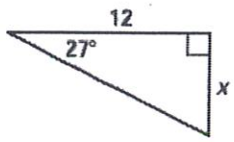
Sin R = $\frac{56}{106} \approx 0.5283$

Cos R = $\frac{90}{106} \approx 0.8491$



Find the value of x to the nearest tenth.

61)

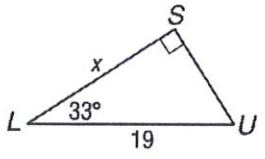


$\tan 27° = \frac{x}{12}$

$12 \cdot \tan 27° = x$

$6.1 \approx x$

62)

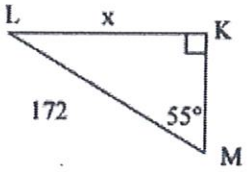


$\cos 33° = \frac{x}{19}$

$19 \cdot \cos 33° = x$

$15.9 \approx x$

63)



$\sin 55° = \frac{x}{172}$

$172 \cdot \sin 55° = x$

$140.9 \approx x$