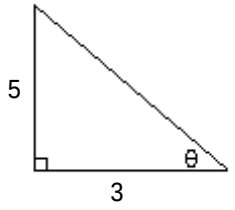
Taller de Repaso 10º

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Find the value of the indicated trigonometric function of the angle θ in the figure. Give an exact answer with a rational denominator.

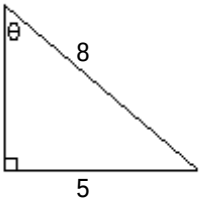
1) 1) _____



Find sin θ.

A) $\sin\theta = \frac{5\sqrt{34}}{34}$ B) $\sin\theta = \frac{\sqrt{34}}{5}$ C) $\sin\theta = \frac{3\sqrt{34}}{34}$ D) $\sin\theta = \frac{\sqrt{34}}{3}$

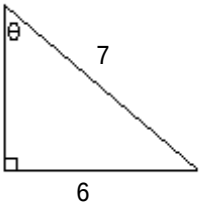
2) 2) _____



Find sin θ.

A) $\frac{5\sqrt{39}}{39}$ B) $\frac{8\sqrt{39}}{39}$ C) $\frac{\sqrt{39}}{8}$ D) $\frac{5}{8}$

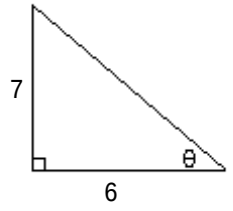
3) 3) _____



Find cos θ.

A) $\frac{6\sqrt{13}}{13}$ B) $\frac{7\sqrt{13}}{13}$ C) $\frac{6}{7}$ D) $\frac{\sqrt{13}}{7}$

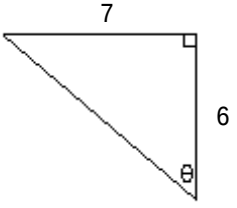
4) 4) _____



Find cos θ.

A) $\cos\theta = \frac{\sqrt{85}}{6}$ B) $\cos\theta = \frac{\sqrt{85}}{7}$ C) $\cos\theta = \frac{6\sqrt{85}}{85}$ D) $\cos\theta = \frac{7\sqrt{85}}{85}$

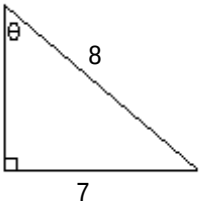
5) 5) _____



Find tan θ.

A) $\tan\theta = \frac{\sqrt{85}}{6}$ B) $\tan\theta = \frac{7}{6}$ C) $\tan\theta = \frac{6}{7}$ D) $\tan\theta = \frac{\sqrt{85}}{7}$

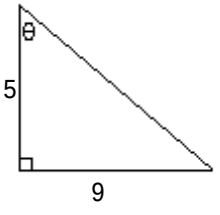
6) 6) _____



Find tan θ.

A) $\frac{7}{8}$ B) $\frac{8\sqrt{15}}{15}$ C) $\frac{\sqrt{15}}{8}$ D) $\frac{7\sqrt{15}}{15}$

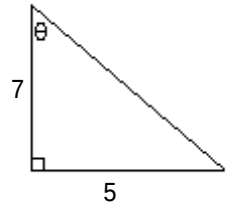
7) 7) _____



Find csc θ.

A) $\csc\theta = \frac{\sqrt{106}}{9}$ B) $\csc\theta = \frac{5\sqrt{106}}{106}$ C) $\csc\theta = \frac{9\sqrt{106}}{106}$ D) $\csc\theta = \frac{\sqrt{106}}{5}$

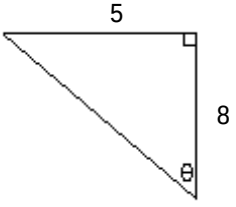
8) 8) _____



Find sec θ.

A) sec $\theta = \frac{5\sqrt{74}}{74}$ B) sec $\theta = \frac{7\sqrt{74}}{5}$ C) sec $\theta = \frac{7\sqrt{74}}{74}$ D) sec $\theta = \frac{\sqrt{74}}{7}$

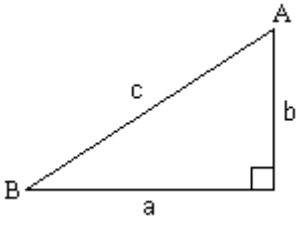
9) 9) _____



Find cot θ.

A) cot $\theta = \frac{5\sqrt{89}}{89}$ B) cot $\theta = \frac{8}{5}$ C) cot $\theta = \frac{5}{8}$ D) cot $\theta = \frac{8\sqrt{89}}{89}$

Solve the right triangle using the information given. Round answers to two decimal places, if necessary.



10) a = 8, B = 30°; Find b, c, and A. 10) _____

A) b = 5.62
c = 10.24
A = 60°

B) b = 4.62
c = 10.24
A =60°

C) b = 4.62
c = 9.24
A = 60°

D) b = 5.62
c = 9.24
A = 60°

11) a = 3, A = 20°; Find b, c, and B. 11) _____

A) b = 8.24
c = 8.77
B = 70°

B) b = 8.24
c = 9.77
B = 70°

C) b = 8.24
c = 9.77
B = 80°

D) b = 8.24
c = 8.77
B = 80°

12) b = 5, c = 8; Find a, B, and A. 12) _____

A) a = 9.43
B = 38.68°
A = 51.32°

B) a = 6.24
B = 51.32°
A = 38.68°

C) a = 6.24
B = 38.68°
A = 51.32°

D) a = 9.43
B = 39.68°
A = 50.32°

13) a = 4, b = 7; Find c, A, and B. 13) _____

A) c = 8.06
A = 30.74°
B = 59.26°

B) c = 5.74
A = 30.74°
B = 59.26°

C) c = 8.06
A = 29.74°
B = 60.26°

D) c = 5.74
A = 29.74°
B = 60.26°

Solve the problem.

14) A surveyor is measuring the distance across a small lake. He has set up his transit on one side of the lake 150 feet from a piling that is directly across from a pier on the other side of the lake. From his transit, the angle between the piling and the pier is 40°. What is the distance between the piling and the pier to the nearest foot? 14) _____

A) 179 ft B) 115 ft C) 96 ft D) 126 ft

15) A radio transmission tower is 150 feet tall. How long should a guy wire be if it is to be attached 5 feet from the top and is to make an angle of 20° with the ground? Give your answer to the nearest tenth of a foot. 15) _____

A) 438.6 ft B) 154.3 ft C) 424.0 ft D) 159.6 ft

16) A building 210 feet tall casts a 60 foot long shadow. If a person looks down from the top of the building, what is the measure of the angle between the end of the shadow and the vertical side of the building (to the nearest degree)? (Assume the person's eyes are level with the top of the building.) 16) _____

A) 74° B) 17° C) 73° D) 16°

17) A tree casts a shadow of 26 meters when the angle of elevation of the sun is 24°. Find the height of the tree to the nearest meter. 17) _____

A) 10 m B) 12 m C) 13 m D) 11 m

18) From the edge of a 1000-foot cliff, the angles of depression to two cars in the valley below are 21° and 28°. How far apart are the cars? Round your answers to the nearest 0.1 ft. 18) _____

A) 724.4 ft B) 713.4 ft C) 714.4 ft D) 724.5 ft

19) A twenty-five foot ladder just reaches the top of a house and forms an angle of 41.5° with the wall of the house. How tall is the house? Round your answer to the nearest 0.1 foot. 19) _____

A) 18.8 ft B) 18.6 ft C) 19 ft D) 18.7 ft

20) Two hikers on opposite sides of a canyon each stand precisely 525 meters above the canyon floor. They each sight a landmark on the canyon floor on a line directly between them. The angles of depression from each hiker to the landmark meter are 37° and 21°. How far apart are the hikers? Round your answer to the nearest whole meter. 20) _____

A) 2064 m B) 2065 m C) 1064 m D) 2063 m