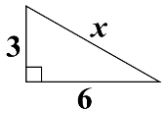
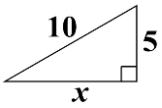
Name: _____ Per: ____

Unit 5 Study Guide

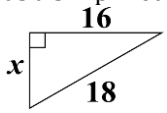
1a. Determine the value of *x*. Write your answer as a simplified radical.



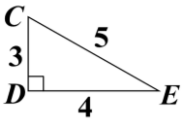
1b. Determine the value of *x*. Write your answer as a simplified radical.



1c. Determine the value of *x*. Write your answer as a simplified radical.

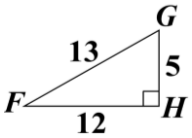


2a. Select all trigonometric ratios that correctly describe the relationships on the given triangle.



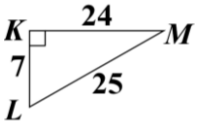
A. $sinC = \frac{4}{5}$	F. $cosE = \frac{3}{5}$
B. $sinC = \frac{3}{5}$	G. $cosE = \frac{4}{5}$
C. $sinE = \frac{3}{5}$	H. $tanC = \frac{3}{4}$
D. $cosC = \frac{4}{5}$	I. $tanC = \frac{4}{3}$
E. $cosD = \frac{4}{5}$	J. $tanE = \frac{4}{3}$

2b. Select all trigonometric ratios that correctly describe the relationships on the given triangle.



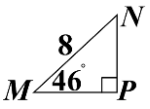
A. $sinF = \frac{5}{13}$	F. $cosG = \frac{5}{13}$
B. $sinG = \frac{12}{13}$	G. $tanF = \frac{5}{13}$
C. $sinG = \frac{12}{5}$	H. $tanH = \frac{5}{12}$
D. $cosF = \frac{5}{13}$	I. $tanH = \frac{12}{5}$
E. $cosF = \frac{12}{13}$	J. $tanG = \frac{12}{5}$

2c. Select all trigonometric ratios that correctly describe the relationships on the given triangle.

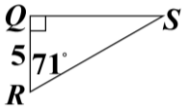


A. $sinL = \frac{24}{7}$	F. $cosM = \frac{7}{25}$
B. $sinL = \frac{7}{25}$	G. $cosM = \frac{7}{24}$
C. $sinM = \frac{7}{25}$	H. $tanL = \frac{24}{7}$
D. $sinM = \frac{7}{24}$	I. $tanL = \frac{7}{24}$
E. $cosL = \frac{7}{25}$	J. $tanM = \frac{7}{24}$

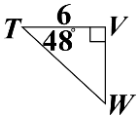
3a. Use a trigonometric ratio to determine the length of NP to the nearest tenth.



3b. Use a trigonometric ratio to determine the length of QS to the nearest tenth.



3c. Use a trigonometric ratio to determine the length of TW to the nearest tenth.



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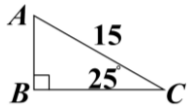
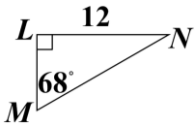
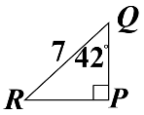
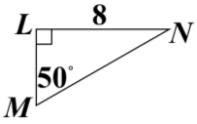
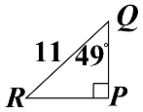
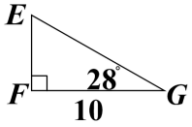
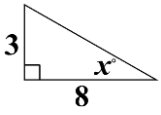
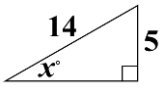
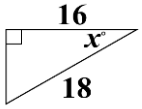
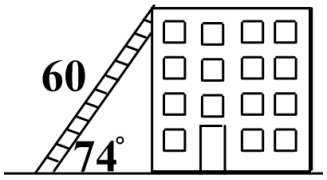
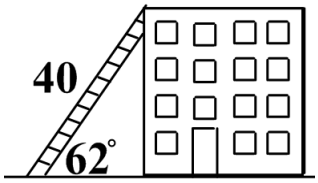
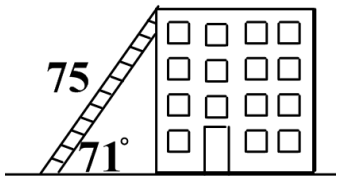
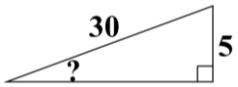
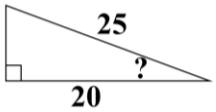
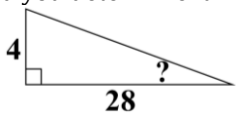
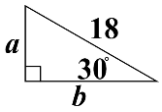
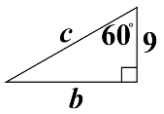
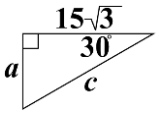
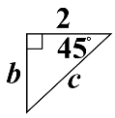
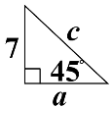
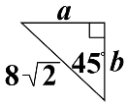
4a. Use a trigonometric ratio to determine the length of BC to the nearest tenth. 	4b. Use a trigonometric ratio to determine the length of LM to the nearest tenth. 	4c. Use a trigonometric ratio to determine the length of RP to the nearest tenth. 
5a. Use a trigonometric ratio to determine the length of MN to the nearest tenth. 	5b. Use a trigonometric ratio to determine the length of PQ to the nearest tenth. 	5c. Use a trigonometric ratio to determine the length of EF to the nearest tenth. 
6a. Determine the value of x to the nearest degree. 	6b. Determine the value of x to the nearest degree. 	6c. Determine the value of x to the nearest degree. 

Name: _____ Per: ____

7a. A fireman leans a 60-foot long ladder against a building. The angle of elevation of the ladder is 74°. How tall is the building? Write your answer as a decimal to the nearest foot. 	7b. A painter leans a 40-foot long ladder against a building. The angle of elevation of the ladder is 62°. How tall is the building? Write your answer as a decimal to the nearest foot. 	7c. A handyman leans a 75-foot long ladder against a building. The angle of elevation of the ladder is 71°. How tall is the building? Write your answer as a decimal to the nearest foot. 
8a. The specifications for a wheel ramp are shown below. What would the angle of elevation of the ramp have to be, and how would you determine it? 	8b. The specifications for a wheel ramp are shown below. What would the angle of elevation of the ramp have to be, and how would you determine it? 	8c. The specifications for a wheel ramp are shown below. What would the angle of elevation of the ramp have to be, and how would you determine it? 
9a. Find the length of all missing sides. Write your answer as a simplified radical. 	9b. Find the length of all missing sides. Write your answer as a simplified radical. 	9c. Find the length of all missing sides. Write your answer as a simplified radical. 
10a. Find the length of all missing sides. Write your answer as a simplified radical. 	10b. Find the length of all missing sides. Write your answer as a simplified radical. 	10c. Find the length of all missing sides. Write your answer as a simplified radical. 

Name: _____ Per: ____

Unit 5 Study Guide Answers

1a. $x = 3\sqrt{5}$	1b. $x = 5\sqrt{5}$	1c. $x = 2\sqrt{17}$
2a. A, C, G, I	2b. A, B, E, F, J	2c. C, E, H, J
3a. $NP = 5.8$	3b. $QS = 14.5$	3c. $TW = 9.0$
4a. $BC = 13.6$	4b. $LM = 4.8$	4c. $RP = 4.7$
5a. $MN = 10.4$	5b. $PQ = 7.2$	5c. $EF = 5.3$
6a. $x = 21°$	6b. $x = 21°$	6c. $x = 27°$
7a. 58 ft	7b. 35 ft	7c. 71 ft
8a. 10° using sine	8b. 37° using cosine	8c. 8° using tangent
9a. $a = 9; b = 9\sqrt{3}$	9b. $b = 9\sqrt{3}; c = 18$	9c. $a = 15; c = 30$
10a. $b = 2; c = 2\sqrt{2}$	10b. $a = 7; c = 7\sqrt{2}$	10c. $a = 8; b = 8$