Lesson 1.1 Practice: Similar Right Triangles and the Idea of a Ratio

School Launch · Trigonometry · Unit 1: Right-Triangle Trigonometry · Worksheet A

Scientific calculator

Name _____ Date _____ Score _____ / 10

Show your work under each problem, one step per line, and check your answer. Word problems: name the unknown, write the equation, solve, and answer in a sentence with units.

1. Triangle ABC has legs 20, 21 and hypotenuse 29. A similar triangle has short leg 60. Find its other two sides and explain why $\sin$ of the matching angle is the same.

EASY

2. Triangle ABC has legs 8, 15 and hypotenuse 17. A similar triangle has short leg 16. Find its other two sides and explain why $\sin$ of the matching angle is the same.

EASY

3. Triangle ABC has legs 3, 4 and hypotenuse 5. A similar triangle has short leg 12. Find its other two sides and explain why $\sin$ of the matching angle is the same.

EASY

4. Triangle ABC has legs 20, 21 and hypotenuse 29. A similar triangle has short leg 100. Find its other two sides and explain why $\sin$ of the matching angle is the same.

MEDIUM

5. Triangle ABC has legs 20, 21 and hypotenuse 29. A similar triangle has short leg 80. Find its other two sides and explain why $\sin$ of the matching angle is the same.

MEDIUM

6. Triangle ABC has legs 3, 4 and hypotenuse 5. A similar triangle has short leg 15. Find its other two sides and explain why $\sin$ of the matching angle is the same.

MEDIUM

7. Triangle ABC has legs 8, 15 and hypotenuse 17. A similar triangle has short leg 40. Find its other two sides and explain why $\sin$ of the matching angle is the same.

MEDIUM

8. Triangle ABC has legs 9, 40 and hypotenuse 41. A similar triangle has short leg 36. Find its other two sides and explain why $\sin$ of the matching angle is the same.

HARD

9. Triangle ABC has legs 9, 40 and hypotenuse 41. A similar triangle has short leg 27. Find its other two sides and explain why $\sin$ of the matching angle is the same.

HARD

10. Triangle ABC has legs 7, 24 and hypotenuse 25. A similar triangle has short leg 28. Find its other two sides and explain why $\sin$ of the matching angle is the same.

HARD