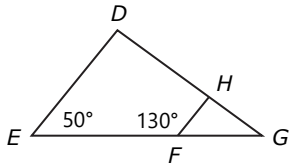


LESSON 86 Review: 2nd Quarter

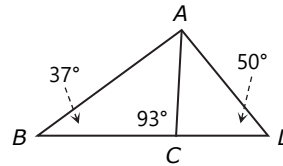
Let's review. Be sure to check the corresponding lesson(s) if you get any problem(s) wrong.

(Lessons 63 ~ 65) Determine if the triangles are similar. If so, write a similarity statement.

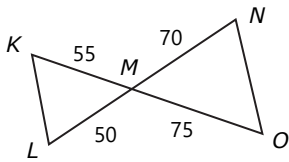
1.



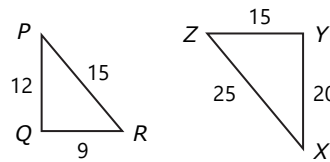
2.



3.

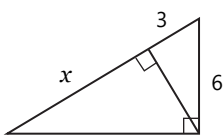


4.

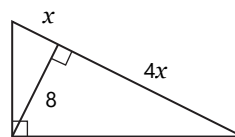


(Lessons 67 & 68) Find the value of x .

5.

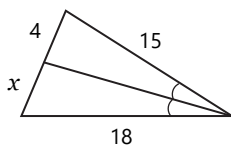


6.

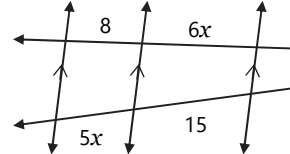


(Lessons 69 & 70) Find the value of x .

7.



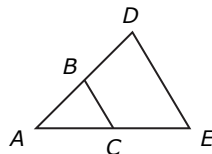
8.



(Lesson 71) Write a proof using any format.

9. Given: midsegment \overline{BC}

Prove: $\frac{AB}{AD} = \frac{AC}{AE}$

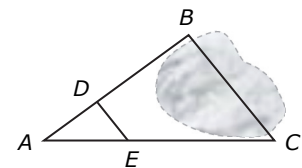


Note: You could copy and fill in the table from Problem 3 in Lesson 71 if you are not taking the honors course.

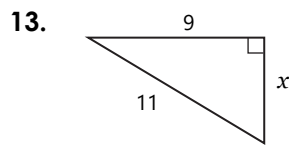
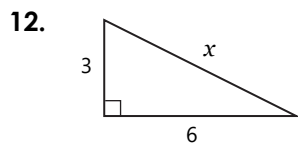
(Lesson 72) Solve. Round to the nearest tenth if necessary.

10. A 20-meter flagpole casts a 24-meter shadow. A nearby building is 135 meters tall. How long is its shadow?

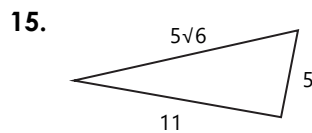
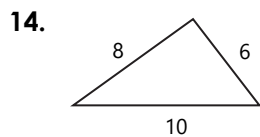
11. To estimate the width BC of a pond, a surveyor places markers A through E such that AD is a third of AB and AE is a third of AC . If $DE = 15$ ft, how wide is the pond?



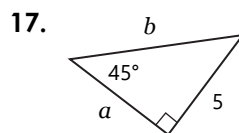
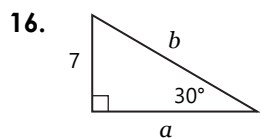
(Lesson 74) Find the value of x in simplest radical form.



(Lesson 75) Classify each triangle as *acute*, *right*, or *obtuse*.



(Lesson 76) Find the values of the variables in simplest radical form.

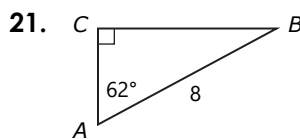
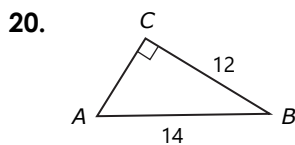


(Lessons 77 & 78) Solve. Give answers in fraction form.

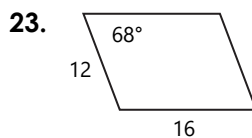
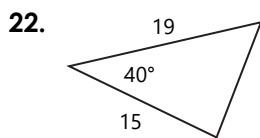
18. Find the sine, cosine, and tangent ratios of 30° .

19. A right triangle has acute angles a° and b° . If $\sin a^\circ = 2/5$, what is $\cos b^\circ$?

(Lesson 80) Solve each triangle. Round all calculations to the nearest tenth.



(Lesson 81) Find the area of each figure to the nearest tenth.



(Lesson 82) Solve. Round all calculations to the nearest tenth.

24. Arya is 1.7-m tall and standing 30 m from the base of a tree. She can see the top of a tree at an angle of elevation of 34° . How tall is the tree?

25. A lighthouse is 56 ft above sea level. The angle of depression from the top of the lighthouse to a boat is 15° . How far is the boat from the lighthouse?