Pythagorean theorem and inequalities Quiz Prep

State if the three side lengths form an acute, obtuse, or right triangle.

1) 6 km, 8 km, 10 km

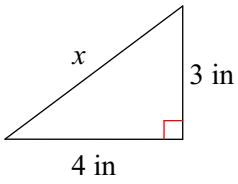
2) 7 km, 12 km, 13 km

3) 6 cm, 8 cm, 9 cm

4) 9 in, 11 in, 15 in

Find the missing side of each triangle. Round your answers to the nearest tenth if necessary.

5)



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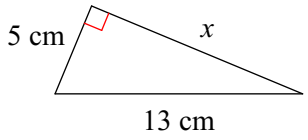

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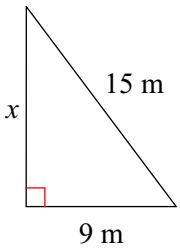

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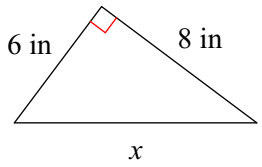
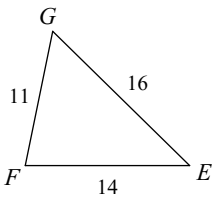


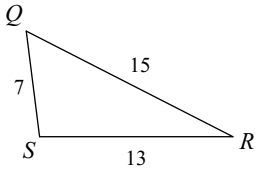
Order the angles in each triangle from smallest to largest.

9)



A) $\angle F, \angle G, \angle E$
B) $\angle E, \angle F, \angle G$
C) $\angle E, \angle G, \angle F$
D) $\angle G, \angle F, \angle E$

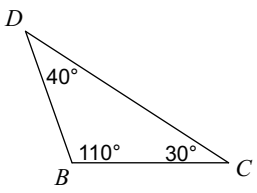
10)



A) $\angle Q, \angle S, \angle R$
B) $\angle S, \angle Q, \angle R$
C) $\angle R, \angle S, \angle Q$
D) $\angle R, \angle Q, \angle S$

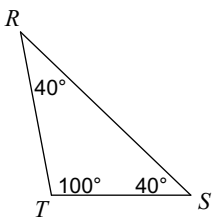
Order the sides of each triangle from shortest to longest.

11)



A) $\overline{DB}$, $\overline{CB}$, $\overline{DC}$
B) $\overline{CB}$, $\overline{DC}$, $\overline{DB}$
C) $\overline{DC}$, $\overline{CB}$, $\overline{DB}$
D) $\overline{CB}$ and $\overline{DB}$; $\overline{DC}$

12)



A) $\overline{ST}$ and $\overline{RS}$; $\overline{RT}$
B) $\overline{ST}$ and $\overline{RT}$; $\overline{RS}$
C) $\overline{RT}$, $\overline{RS}$, $\overline{ST}$
D) $\overline{RT}$ and $\overline{RS}$; $\overline{ST}$

State if the three numbers can be the measures of the sides of a triangle.

13) 9, 6, 3

14) 3, 12, 11

15) The foot of a ladder is placed 6 feet from a wall. If the top of the ladder rests 8 feet up on the wall, how long is the ladder?

16) A cartoon measures 32 inches long and 16 inches high. What is the diagonal length of the box?

Simplify.

17) $\sqrt{108}$

18) $\sqrt{112}$

19) $\sqrt{80}$

20) $\sqrt{32}$

21) $\sqrt{50}$

22) $\sqrt{75}$

Pythagorean theorem and inequalities Quiz Prep

State if the three side lengths form an acute, obtuse, or right triangle.

1) 6 km, 8 km, 10 km

Right

2) 7 km, 12 km, 13 km

Acute

3) 6 cm, 8 cm, 9 cm

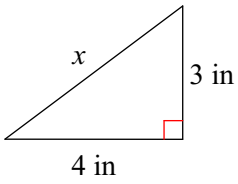
Acute

4) 9 in, 11 in, 15 in

Obtuse

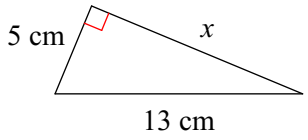
Find the missing side of each triangle. Round your answers to the nearest tenth if necessary.

5)



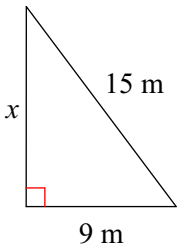
5 in

6)



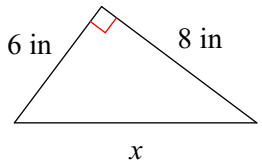
12 cm

7)



12 m

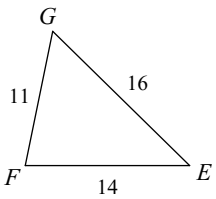
8)



10 in

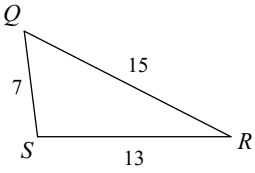
Order the angles in each triangle from smallest to largest.

9)



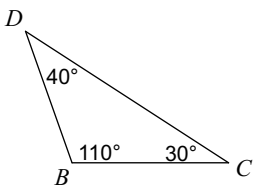
A) $\angle F, \angle G, \angle E$
B) $\angle E, \angle F, \angle G$
*C) $\angle E, \angle G, \angle F$
D) $\angle G, \angle F, \angle E$

10)

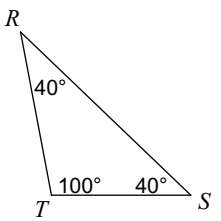


A) $\angle Q, \angle S, \angle R$
B) $\angle S, \angle Q, \angle R$
C) $\angle R, \angle S, \angle Q$
*D) $\angle R, \angle Q, \angle S$

Order the sides of each triangle from shortest to longest.

11) 

*A) $\overline{DB}, \overline{CB}, \overline{DC}$
B) $\overline{CB}, \overline{DC}, \overline{DB}$
C) $\overline{DC}, \overline{CB}, \overline{DB}$
D) $\overline{CB}$ and $\overline{DB}$; $\overline{DC}$

12) 

A) $\overline{ST}$ and $\overline{RS}$; $\overline{RT}$
*B) $\overline{ST}$ and $\overline{RT}$; $\overline{RS}$
C) $\overline{RT}, \overline{RS}, \overline{ST}$
D) $\overline{RT}$ and $\overline{RS}$; $\overline{ST}$

State if the three numbers can be the measures of the sides of a triangle.

13) 9, 6, 3

No

14) 3, 12, 11

Yes

15) The foot of a ladder is placed 6 feet from a wall. If the top of the ladder rests 8 feet up on the wall, how long is the ladder?

10

16) A cartoon measures 32 inches long and 16 inches high. What is the diagonal length of the box?

35.78

Simplify.

17) $\sqrt{108}$

$6\sqrt{3}$

18) $\sqrt{112}$

$4\sqrt{7}$

19) $\sqrt{80}$

$4\sqrt{5}$

20) $\sqrt{32}$

$4\sqrt{2}$

21) $\sqrt{50}$

$5\sqrt{2}$

22) $\sqrt{75}$

$5\sqrt{3}$