Math 2   Name: _____
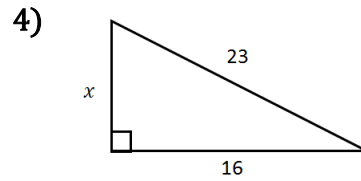Unit 5 Test Review

Find the missing sides. Round to the nearest tenth.

1)

10

x

24

2)

17

x

15

3)

7

x

9

4)

23

x

16
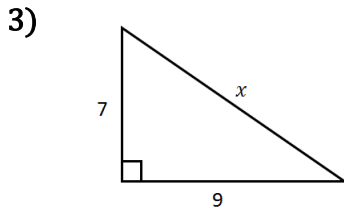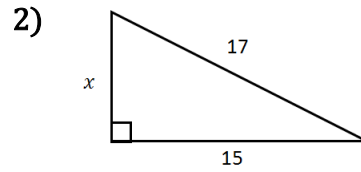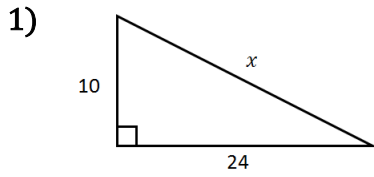
Determine if the following triangle lengths form a right triangle.

5) $25, 7, 24$ Right Triangle / Not Right Triangle

6) $25, 20, 17$ Right Triangle / Not Right Triangle

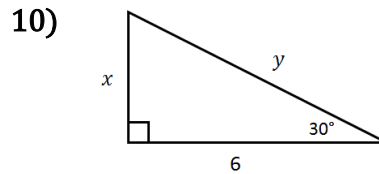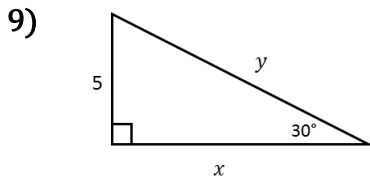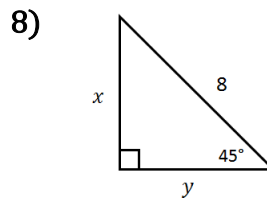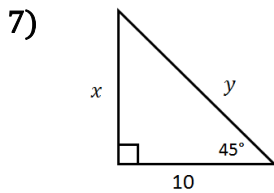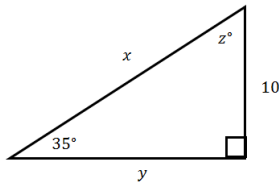Use the rules of special right triangles to solve for missing sides. Provide exact answers in simplified radical form.

7)

x y

45°

10

8)

x 8

45°

y

9)

5   y

30°

x

10)

x y

30°

6

11)

x 8

30°

y

12)

a b

c

d e 8
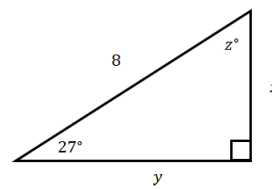
30°   45°

g h
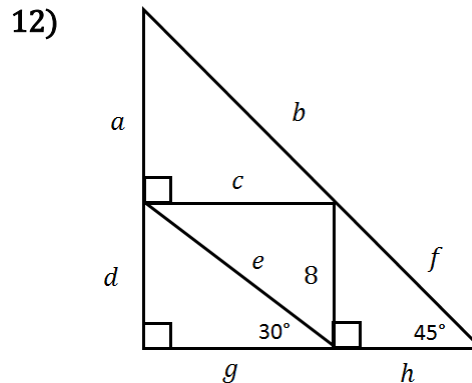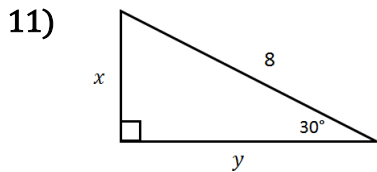
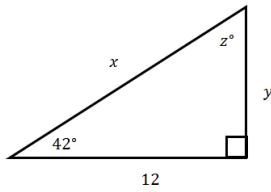Use right triangle trig rules to solve for the missing sides and angles. Round to the nearest tenth.
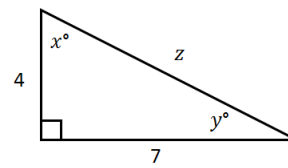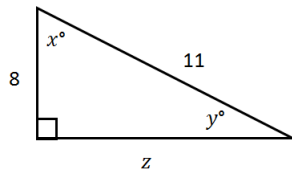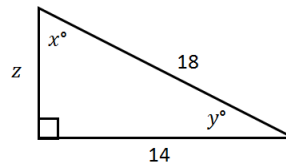
13)

14)

15)

16)

17)

18)

19) The angle of elevation to the top of the Empire State Building in New York is $11°$ from a point on the ground 1 mile from the base of the building. Find the height of the Empire State Building in feet. Note: 5280 feet in a mile.

20) A 96 foot tree casts a shadow that is 120 feet long. What is the angle of elevation of the sun?

21) A man is lying on the beach, flying a kite. He holds the end of the kite string at ground level and estimates the angle of elevation of the kite to be $50°$. If the string is 450 feet long, how high is the kite above the ground?

22) Find the altitude of an equilateral triangle with base 6 feet.

23) From the top of a 120 foot tower, an air traffic controller observes an airplane on the runway at an angle of depression of $19°$. How far from the base of the tower is the airplane?

24) The area of a square garden is 25 square meters. The gardener is going to put a fence on the diagonal. How much fence does she need?