

How Did the Judge Find Out About the Rotten Milk?

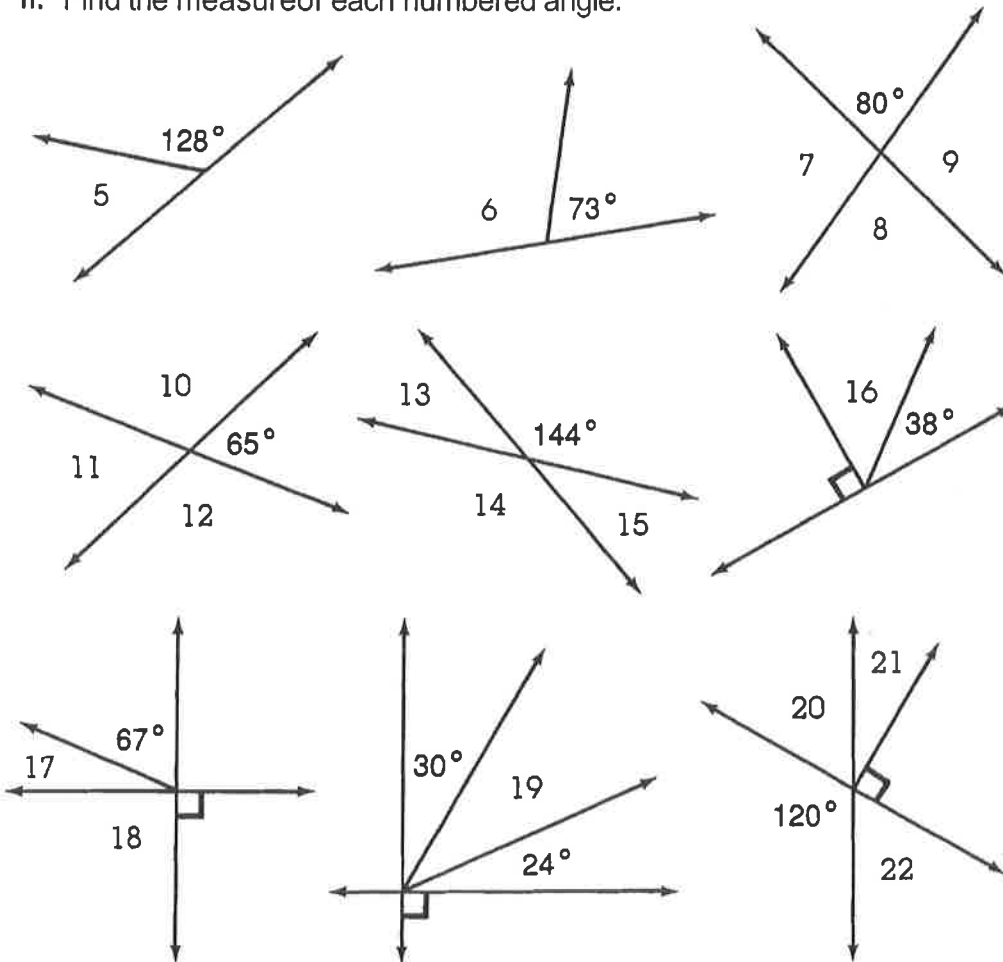
Do each exercise and find your answer in the Code Key. Notice the letter next to the answer. Write this letter in the box containing the number for the exercise.

I. Complete each statement.

- ① Two angles are **complementary** if the sum of their measures is _____.
- ② Two angles are **supplementary** if the sum of their measures is _____.
- ③ The **complement** of a 30° angle has a measure of _____.
- ④ The **supplement** of a 65° angle has a measure of _____.



II. Find the measure of each numbered angle.



CODE KEY	
23°	D
30°	Q
36°	T
52°	A
60°	R
65°	U
80°	I
90°	O
100°	H
107°	S
115°	E
144°	W
180°	N

13	7	12	3	10	14	16	6	18	17	1	20	8	2	19	9	4	21	11	5	22	15
----	---	----	---	----	----	----	---	----	----	---	----	---	---	----	---	---	----	----	---	----	----

Simplifying Radicals Worksheet 1

Simplify.

1) $\sqrt{75}$

2) $\sqrt{16}$

3) $\sqrt{36}$

4) $\sqrt{64}$

5) $\sqrt{80}$

6) $\sqrt{30}$

7) $\sqrt{8}$

8) $\sqrt{18}$

9) $\sqrt{32}$

10) $\sqrt{12}$

11) $\sqrt{8}$

12) $\sqrt{108}$

13) $\sqrt{125}$

14) $\sqrt{50}$

15) $\sqrt{175}$

16) $\sqrt{28}$

17) $\sqrt{45}$

18) $\sqrt{72}$

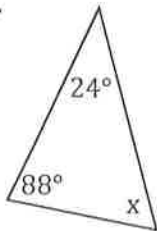
19) $\sqrt{20}$

20) $\sqrt{150}$

Day 9

For each, find the measure of the missing angle.

1.



Triangle Sum Theorem

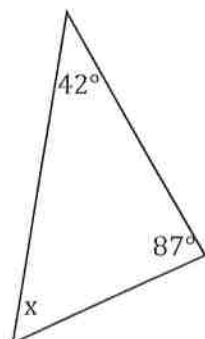
$$24^\circ + 88^\circ + x = 180^\circ$$

$$112^\circ + x = 180^\circ$$

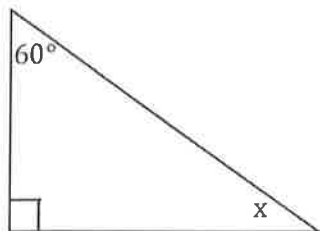
$$-112^\circ \quad -112^\circ$$

$$x = 68^\circ$$

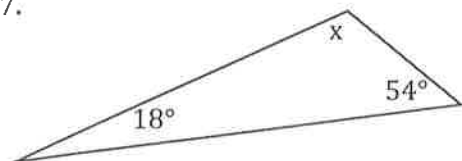
3.



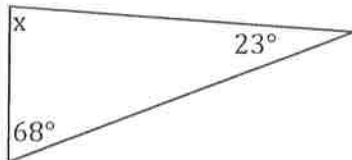
5.



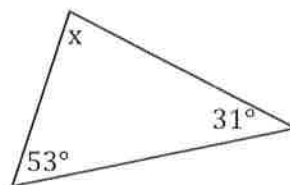
7.



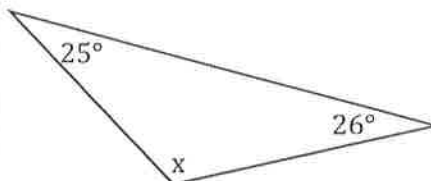
2.



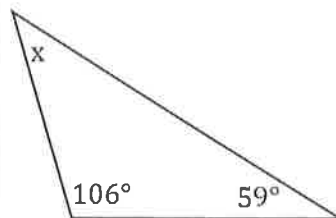
4.



6.



8.



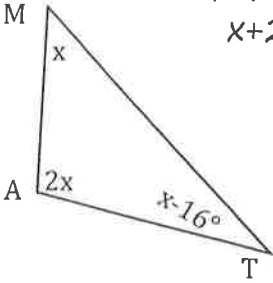
Bubble all the correct answers from above. Don't bubble incorrect answers.

68°
 271°
 96°
 30°
 120°
 108°
 139°
 15°
 129°
 231°
 34°
 89°
 51°
 54°

Day 9

Solve for x.

25.



Triangle Sum Theorem

$$x+2x+(x-16^\circ)=180^\circ$$

$$x+2x+x-16^\circ=180^\circ$$

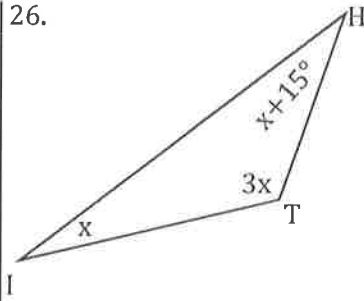
$$4x-16^\circ=180^\circ$$

$$+16^\circ \quad +16^\circ$$

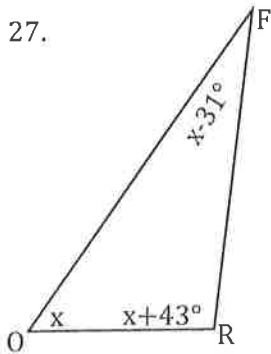
$$\frac{4x=196^\circ}{4 \quad 4}$$

$$x=49^\circ$$

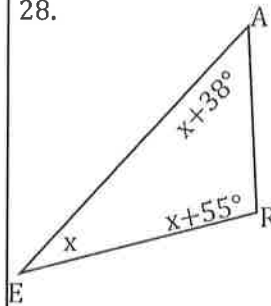
26.



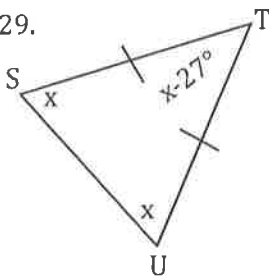
27.



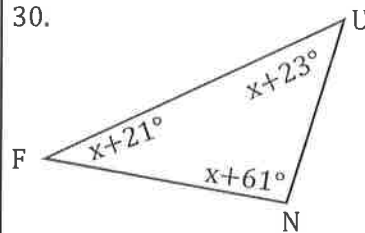
28.



29.



30.

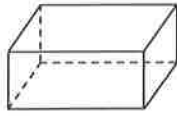


Bubble all the correct answers from above. Don't bubble incorrect answers.

- 165°
 25°
 69°
 27°
 29°
 55°
 56°
 39°
 33°
 49°

VOLUME OF PRISMS & CYLINDERS

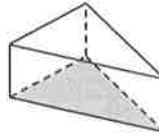
Rectangular Prisms:



$$V = \quad$$

l = length
 w = width
 h = height

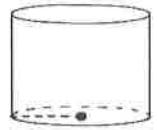
All Prisms:



$$V = \quad$$

B = area of the base
 h = height

Cylinders:

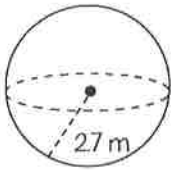


$$V = \quad$$

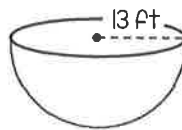
r = radius
 h = height

Find the volume AND surface area of each figure below.

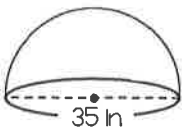
21



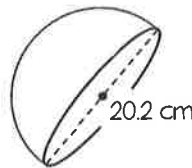
22



23



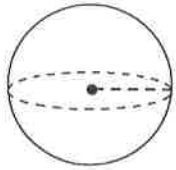
24



Day 9

VOLUME & SURFACE AREA of SPHERES & HEMISPHERES

Spheres:



$V =$

$SA =$

Hemispheres:

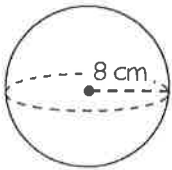


$V =$

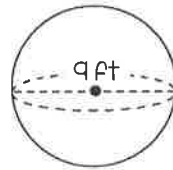
$SA =$

Find the volume AND surface area of each figure below.

19

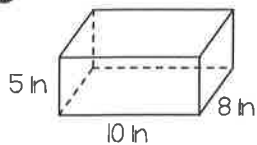


20

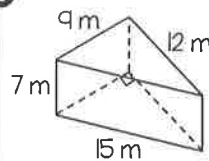


Find the volume of each figure below.

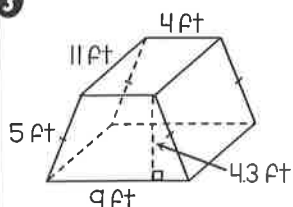
1



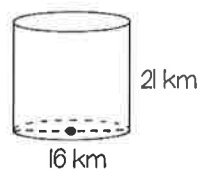
2



3



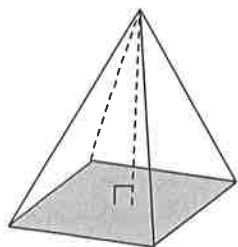
4



VOLUME: Prisms & Cylinders

VOLUME OF PYRAMIDS & CONES

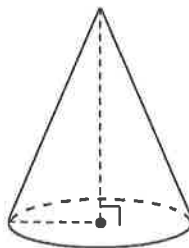
Pyramids:



$$V =$$

B = area of the base
h = height

Cones:

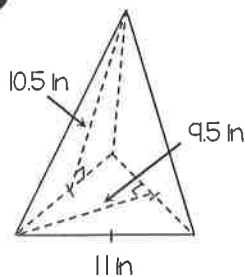


$$V =$$

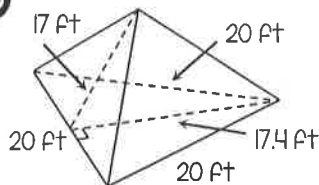
r = radius
h = height

Find the surface area of each figure below.

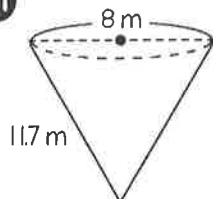
15



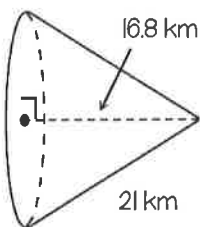
16



17

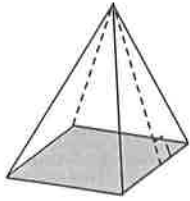


18



SURFACE AREA OF PYRAMIDS & CONES

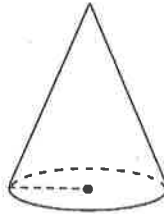
Pyramids:



$$SA =$$

l = slant height
 p = perimeter of the base
 B = area of the base

Cones:

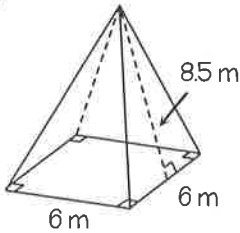


$$SA =$$

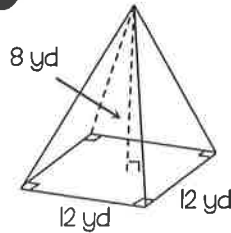
r = radius
 l = slant height

Find the surface area of each figure below.

13

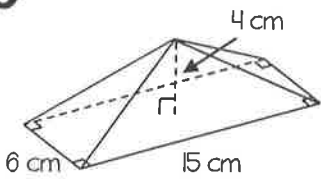


14

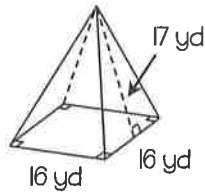


Find the volume of each figure below.

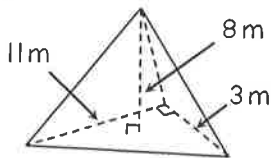
5



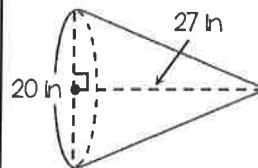
6



7

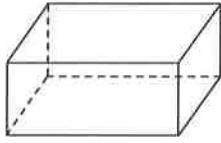


8



SURFACE AREA OF PRISMS & CYLINDERS

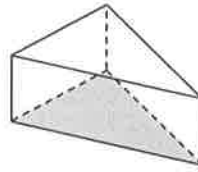
Rectangular Prisms:



SA =

l = length
 w = width
 h = height

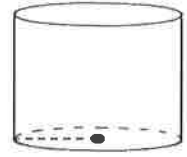
All Prisms:



SA =

h = height between the bases
 p = perimeter of the base
 B = area of the base

Cylinders:

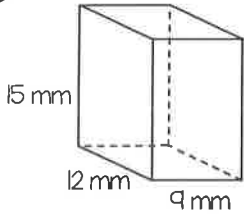


SA =

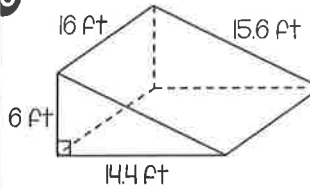
r = radius
 h = height

Find the surface area of each figure below.

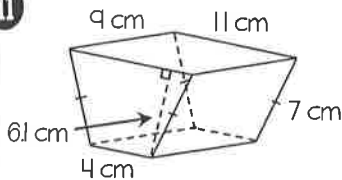
9



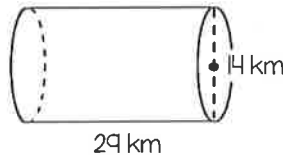
10




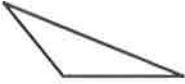
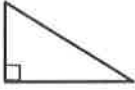
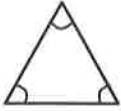
11



12

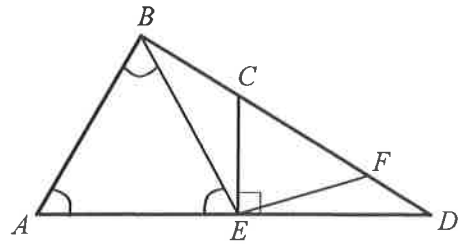


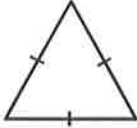
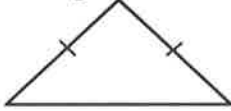

Classifying Triangles

BY ANGLES			
3 acute angles 	1 obtuse angle 	1 right angle 	3 congruent angles 

Directions: Using the diagram, classify each triangle by its angles.

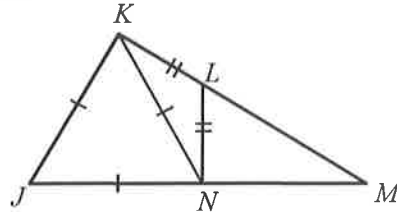
- $\triangle CDE$: _____
- $\triangle BCE$: _____
- $\triangle ABE$: _____
- $\triangle BDE$: _____
- $\triangle CFE$: _____



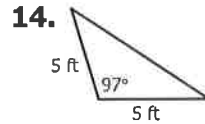
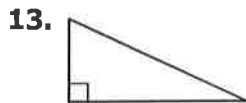
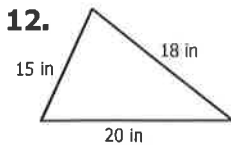
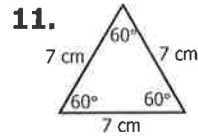
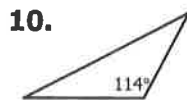
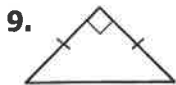
BY SIDES		
3 congruent sides 	2 congruent sides 	no congruent sides 

Directions: Using the diagram, classify each triangle by its sides.

- $\triangle JKM$: _____
- $\triangle KLN$: _____
- $\triangle JKN$: _____



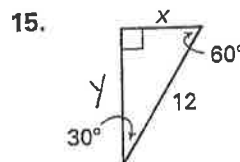
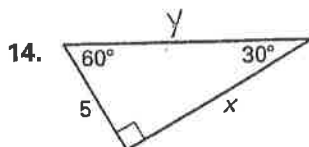
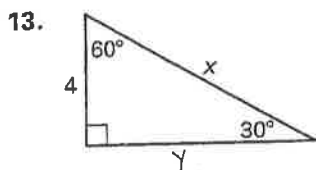
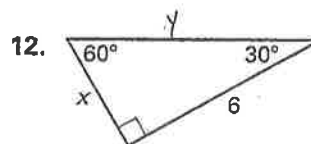
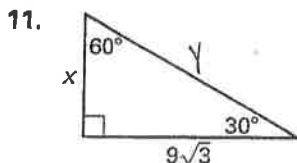
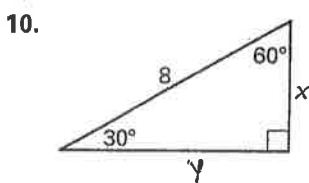
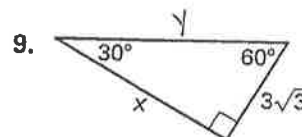
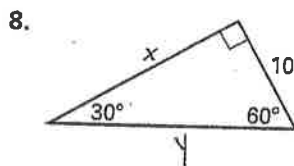
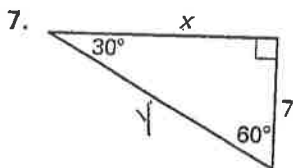
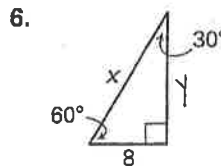
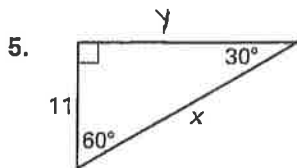
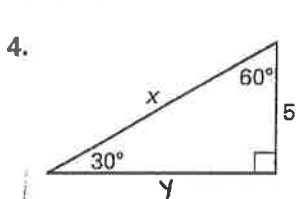
Directions: Classify each triangle by its angles and sides.



WORKSHEET: The 30-60-90 Triangle

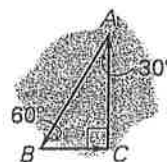
1. Draw the parent triangle for the 30-60-90 triangle.
2. The hypotenuse of a 30-60-90 triangle is how many times as long as the shorter leg?
3. The longer leg of a 30-60-90 triangle is how many times as long as the shorter leg?

Find the length of x and y in the 30-60-90 triangles below. Round to tenths. Show all work on NBP.



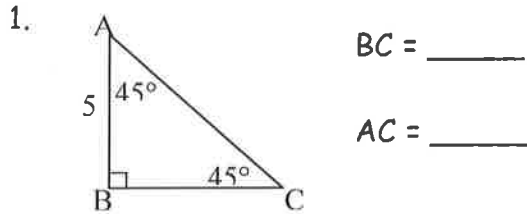
A jogging path starts at point A , turns at point B , turns at point C and stops at point A , as shown.

16. If $AB = 2$ miles, find BC and CA . Round your answers to the nearest tenth of a mile.
17. Find the total length of the jogging path. Round your answer to the nearest tenth of a mile.

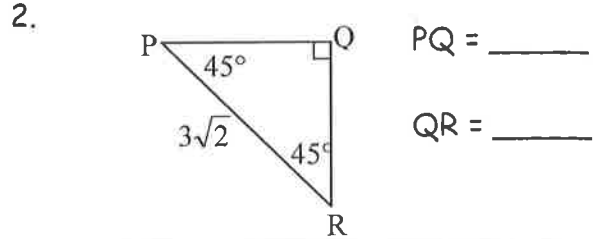


Worksheet: Special Right Triangles 45-45-90

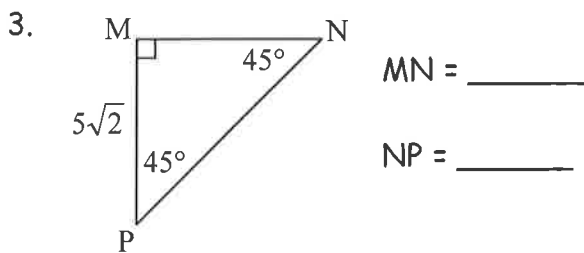
Find the lengths of the indicated sides. SHOW ALL WORK.



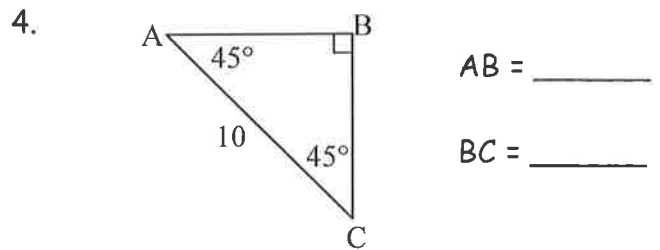
Leg(x)	Leg(x)	Hypotenuse ($x\sqrt{2}$)



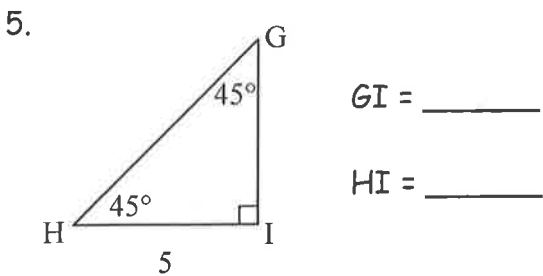
Leg(x)	Leg(x)	Hypotenuse ($x\sqrt{2}$)



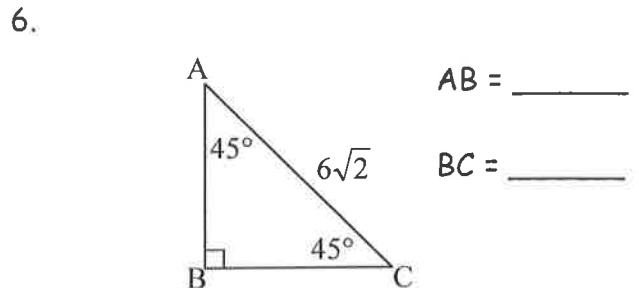
Leg(x)	Leg(x)	Hypotenuse ($x\sqrt{2}$)



Leg(x)	Leg(x)	Hypotenuse ($x\sqrt{2}$)



Leg(x)	Leg(x)	Hypotenuse ($x\sqrt{2}$)

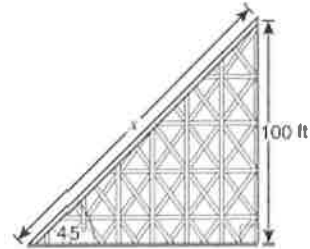


Leg(x)	Leg(x)	Hypotenuse ($x\sqrt{2}$)

Day 10

7. Matt wants to design the first section of a roller coaster track. He wants the ramp section to rise at 45° with the horizontal and connect at the top of a segment 100 feet high. Find x , the length of the ramp Matt needs to complete his section of the coaster track?

Leg(x)	Leg (x)	Hypotenuse ($x\sqrt{2}$)



8. A square has a perimeter of 32 inches. How long is the diagonal?

Leg(x)	Leg (x)	Hypotenuse ($x\sqrt{2}$)

9. A square has side lengths of 23 inches. How long is each diagonal?

Leg(x)	Leg (x)	Hypotenuse ($x\sqrt{2}$)

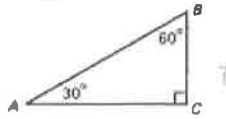
10. Sam's square bedroom has a diagonal of $9\sqrt{2}$ feet. What is the length of each side?

Leg(x)	Leg (x)	Hypotenuse ($x\sqrt{2}$)

Day 10 HW

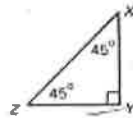
Special Right Triangles Worksheet

Exercises 1-6 refer to the 30-60-90 triangle. Using the given information, find the indicated length.



1. $AB=14$; $BC=$
2. $BC=7$; $AB=$
3. $BC=8$; $AC=$
4. $AB=16$; $AC=$
5. $AC=9\sqrt{3}$; $BC=$
6. $AC=4\sqrt{3}$; $AB=$

Exercises 7-12 refer to the 45-45-90 triangle. Using the given information, find the indicated length.



7. $XY=7$; $XZ=$
8. $YZ=10$; $XZ=$
9. $XZ=11\sqrt{2}$; $YZ=$
10. $XZ=10$; $XY=$
11. $YZ=7\sqrt{2}$; $XZ=$
12. $XZ=12$; $YZ=$

13. The length of the hypotenuse of a 30-60-90 triangle is 20. What is the length of the shorter leg?

14. A ladder leaning against a wall makes a 60 angle with the ground. The base of the ladder is 3 m from the building. How high above the ground is the top of the ladder?

Day 11 WK

Kuta Software - Infinite Geometry

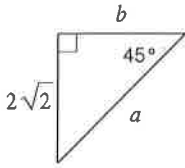
Name _____

Special Right Triangles

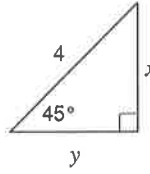
Date _____ Period _____

Find the missing side lengths. Leave your answers as radicals in simplest form.

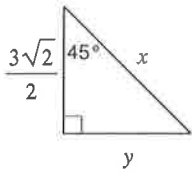
1)



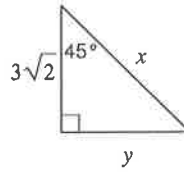
2)



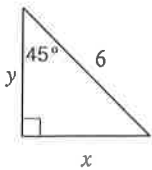
3)



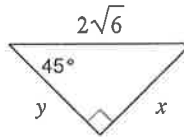
4)



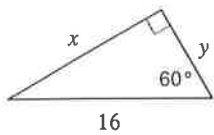
5)



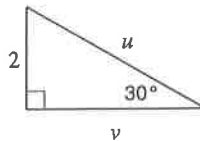
6)



7)



8)



Day 11

Kuta Software - Infinite Pre-Algebra

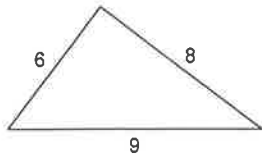
The Pythagorean Theorem

Name _____

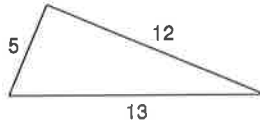
Date _____ Period _____

Do the following lengths form a right triangle?

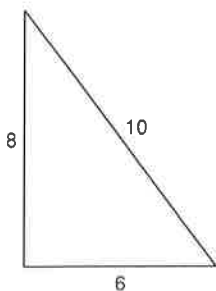
1)



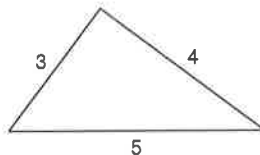
2)



3)



4)

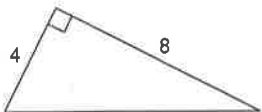


5) $a = 6.4$, $b = 12$, $c = 12.2$

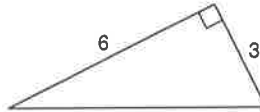
6) $a = 2.1$, $b = 7.2$, $c = 7.5$

Find each missing length to the nearest tenth.

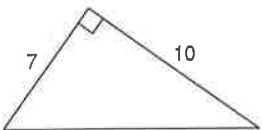
7)



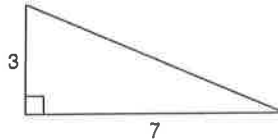
8)



9)



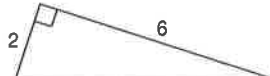
10)



11)

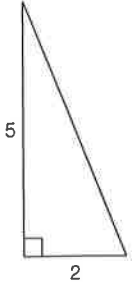


12)

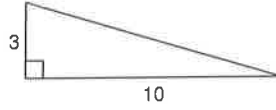


Day 11

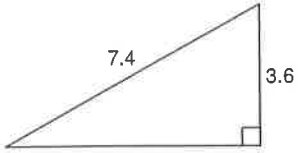
13)



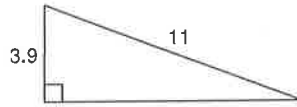
14)



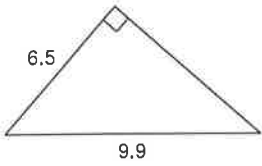
15)



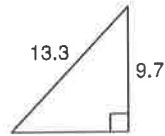
16)



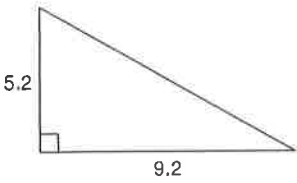
17)



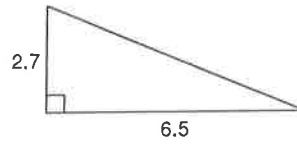
18)



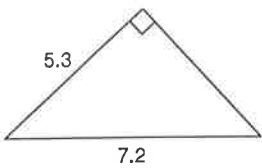
19)



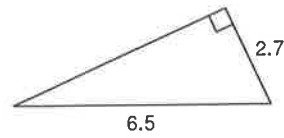
20)



21)

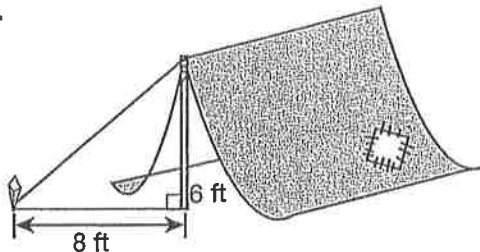


22)



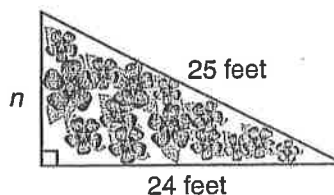
Use the Pythagorean theorem to solve each problem.

A tent is supported by a guy rope tied to a stake, as shown in the diagram. What is the length of the rope? _____

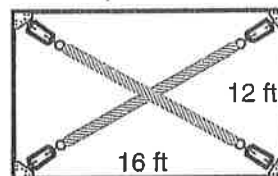


If the supporting stake in Problem 1 were 15 feet from the tent, and an 8-foot tent pole were used, what would be the length of the guy rope? _____

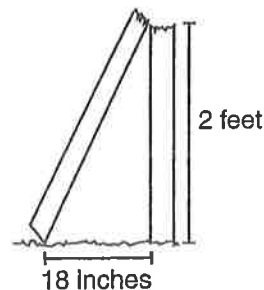
Stephanie is planning a right triangular garden. She marked two sides that measure 24 feet and 25 feet. What is the length of side n ? _____



A builder needs to add diagonal braces to a wall. The wall is 16 feet wide by 12 feet high. What is the length of each brace? _____



The diagram at the right shows how a post was broken. What was the original height of the post? _____



The sets of numbers 3, 4, 5 and 5, 12, 13 are examples of Pythagorean triples. Use what you know about the Pythagorean theorem to explain why these numbers are called Pythagorean triples. _____

Determine whether the following sets of three numbers are Pythagorean triples. Write *yes* or *no* for each set of numbers.

8, 15, 17 _____

15, 20, 25 _____

20, 48, 52 _____

2, 9, 11 _____

39, 80, 89 _____

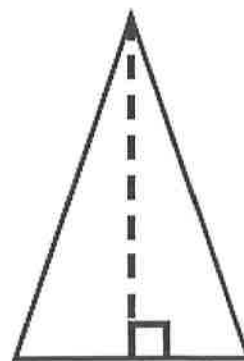
Day 11 HW

6. Two sides of a right triangle are 8" and 12".
- A. Find the the area of the triangle if 8 and 12 are legs.

 - B. Find the area of the triangle if 8 and 12 are a leg and hypotenuse.

7. The area of a square is 81 cm^2 . Find the perimeter of the square.

8. An isosceles triangle has congruent sides of 20 cm. The base is 10 cm. What is the area of the triangle?



9. A baseball diamond is a square that is 90' on each side. If a player throws the ball from 2nd base to home, how far will the ball travel?

10. Jill's front door is 42" wide and 84" tall. She purchased a circular table that is 96 inches in diameter. Will the table fit through the front door?