Mrs. Bledsoe – Plans for Home Instruction for March 19 – 27, 2020

Algebra 2: 7th & 9th Periods

Notes for the Pythagorean Theorem are provided before the assignment in this packet.

Thursday, March 19, 2020: Do the "Pythagorean Theorem – Home Assignment – Day 1" Dated 3/19/2020.

Friday, March 20, 2020: Do the "Pythagorean Theorem – Home Assignment – Day 2" Dated 3/20/2020.

For the week of March 23 – 25, 2020, Triangle Trig Review: SohCahToa Notes have been provided (1 page).

Monday, March 23, 2020: Do Triangle Trig Review: SohCahToa, page 2 which is dated 3/23/2020

Tuesday, March 24, 2020: Do Triangle Trig Review: SohCahToa, page 3 & page 4 which are dated 3/24/2020

Wednesday, March 25, 2020: Do Triangle Trig Review: SohCahToa, page 5 which is dated 3/25/2020

Thursday, March 26, 2020: SohCahToa Home Assignment, Day 6 which is dated 3/26/2020.

Friday, March 27, 2020: SohCahToa Home Assignment, Day 7 which is dated 3/27/2020.

Please do the best you can on these assignments. I hope you are not overwhelmed and that you do not get sick. Any messages via Livegrades or email are welcomed and encouraged. My school email is mbledsoe@k12.wv.us. I know this transition is a bit difficult and you may need help so I will be watching for questions and trying to provide assistance as much as possible.

Remember to take some breaks and relax after you have a plan on how to keep up with the work assigned and know how much break time you have. Don't procrastinate. Be responsible. Be safe.

Sincerely,

Mrs. Melissa Bledsoe

Pythagorean Theorem Home Notes Days 1 & 2   Date 3/19-20/2020 Period 7+9

Examples

Examples for Home Assignment #1:
Find the missing side of each triangle. Round your answers to the nearest tenth if necessary.

1)
4.2 yd   10.3 yd
$x \approx \sqrt{123.73}$
$x \approx 11.1\, yd$
$x \leftarrow$ hypotenuse (Add)
$(10.3)^2 + (4.2)^2 = 106.09 + 17.6$ "c"
$= 123.73$

2) Subtract
12.8 mi c Hyp
6.4 mi
12.8^2
-6.4^2
$\overline{122.88}$
$\rightarrow x \approx \sqrt{122.88} \rightarrow x \approx 11.1$ mi

3)
12.1 m
hyp = c x Add
4.9 m
$12.1^2 = 146.41$
$+4.9^2 = +24.01$
$\overline{170.42}$
$x \approx \sqrt{170.42} \rightarrow x \approx 13.1\, m$

4) subtract → 13.2 yd hyp = c
8.5 yd x
$13.2^2 = 174.24$
$-8.5^2 = -72.25$
$\overline{101.99}$
$x \approx \sqrt{101.99}$
$x \approx 10.1\, yd$

5)
11.3 ft
hyp = c x Add
12 ft
$11.3^2 \Rightarrow 127.69$
$+12^2 = +144$
$\overline{271.69}$
$x \approx \sqrt{271.69}$
$x \approx 16.5\, ft$

Pythagorean Theorem
$a^2 + b^2 = c^2$
$(short\ side)^2 + (medium\ side)^2 = (long\ side)^2$

Process:
① Square the numbers.
② If one the #'s is the hypotenuse, Subtract; If you do not know the hypotenuse, Add.
③ Take the square root.

For Simplest radical form, Simplify the $\sqrt{\#}$.

For a decimal rounded to the nearest tenth, find the square root and round it.

Examples for Home Assignment #2:
Find the missing side of each triangle. Leave your answers in simplest radical form.

6) Subtract
16 mi hyp
9 mi
x
⑥ $16^2 = 256$
$-9^2 = -81$
$\overline{175}$
$x = \sqrt{175} = 5\sqrt{7}\, mi$
$\sqrt{25 \cdot \sqrt{7}}$

7) Subtract
13 in hyp
$x = \sqrt{153}$ x 4 in
$13^2 - 4^2$
$169 - 16 = 153$
$x = 3\sqrt{17}$
$\sqrt{9 \cdot 17}$

8)
8 in   hyp 11 in ⑧ Subtract
x
$11^2 = 121$
$-8^2 = -64$
$\overline{57}$
$x = \sqrt{57}\, in$

9)
x 10 km hyp Subtract
5 km
$10^2 = 100$
$-5^2 = -25$
$\overline{75}$
$x = \sqrt{75}$
$\sqrt{25 \cdot 5}$
$x = 5\sqrt{5}\, km$

10)
$\sqrt{15}$ mi hyp
x
$2\sqrt{2}$ mi
subtract
⑩ $(\sqrt{15})^2 = 15$
$-(2\sqrt{2})^2 = -8$*
$\overline{7}$
$x = \sqrt{7}\, mi$
* $2\sqrt{2} \cdot 2\sqrt{2} = 8$
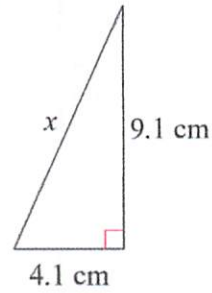$2(2)\sqrt{2}\sqrt{2} = 4\sqrt{4} = 4(2)$

Pythagorean Theorem - Home Assignment - Day 1   Date: 3/19/2020 (Thursday)

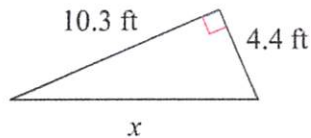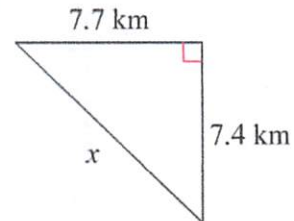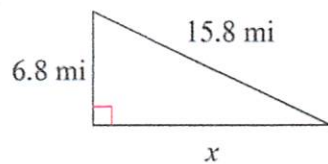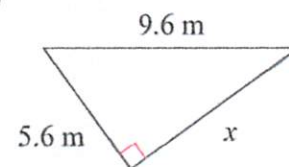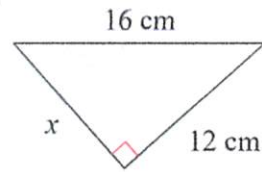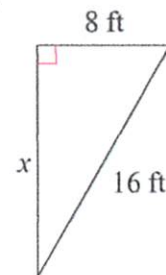**Find the missing side of each triangle. Round your answers to the nearest tenth if necessary.**

1)

11.2 km

8.2 km x

2)

x 9.1 cm

4.1 cm

3)

10.3 ft   4.4 ft

x

4)

7.7 km

7.4 km

x

5)

15.8 mi

6.8 mi

x

6)

9.6 m

5.6 m x

7)

7.1 ft x

4.3 ft

8)

6 yd x

6.5 yd
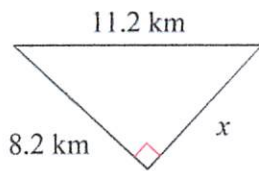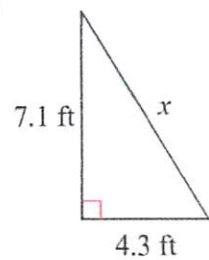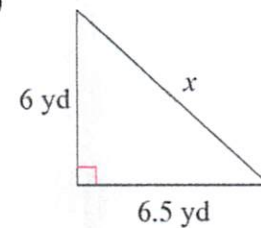
Pythagorean Theorem - Home Assignment (Day 2)   Date 3/20/2020 (Friday)

Find the missing side of each triangle. Leave your answers in simplest radical form.

1)

11 mi

10 mi

x

2)

16 cm

x 12 cm

3)

$\sqrt{101}$ cm

x

15 cm

4)

16 m

x 7 m

5)

$\sqrt{14}$ m

x

$\sqrt{15}$ m

6)

8 ft

x 16 ft

7)

x

10 cm

16 cm

8)

13 in

x

15 in
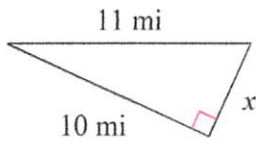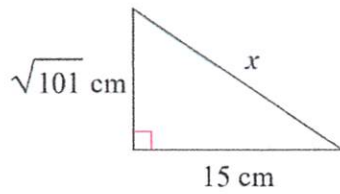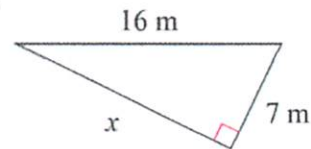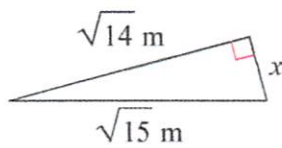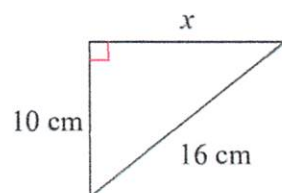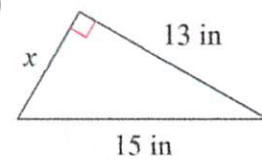
Algebra 2 Mrs. Bledsoe Name _____
7th & 9th periods   Home Instruction

Part I "Triangle Trig Review: SohCahToa" 3/23-25/2020 (Monday-Wednesday)
Model Problems
(pg 1)

$$\sin(B) = \frac{opposite}{hypotenuse}$$ $$\cos(B) = \frac{adjacent}{hypotenuse}$$ $$\tan(B) = \frac{opposite}{adjacent}$$
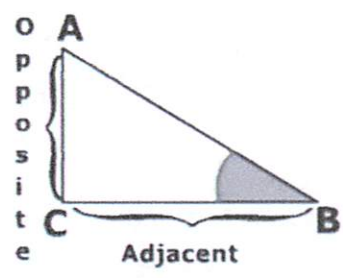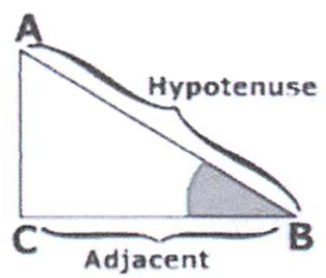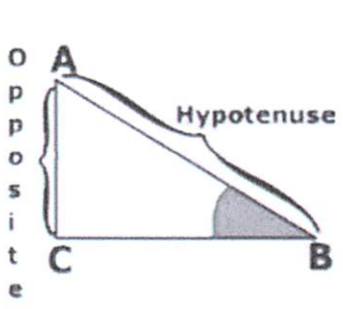
Model Problem 1)   Identify The side adjacent, opposite to angle x and the hypotenuse

Adjacent to x : **A**

Opposite X :   **B**

Hypotenuse :   **C**
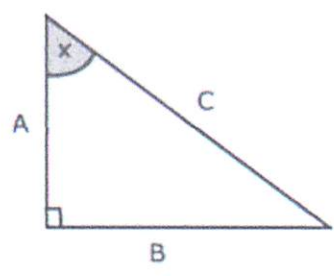
Model Problem 2) What is sin(k) , cos(k) and tan(k)?

Use SOHCAHTOA

$$\sin(k) = \frac{opposite}{hypotenuse} = \frac{4}{5} = .8$$

$$\cos(k) = \frac{adjacent}{hypotenuse} = \frac{3}{5} = .6$$

$$\tan(k) = \frac{opposite}{adjacent} = \frac{4}{3} = 1.33$$
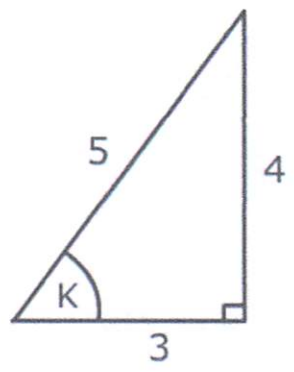
II. *Identifying Opposite, Adjacent and Hypotenuse*

Identify

1) the hypotenuse

2) the side opposite of $\angle Z$: _____

3) the side adjacent to $\angle Z$: _____
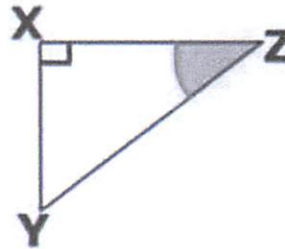
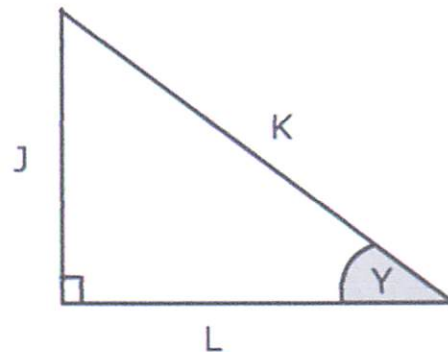**Identify**

4) the hypotenuse

5) the side opposite of $\angle H$: _____

6) the side adjacent to $\angle H$: _____
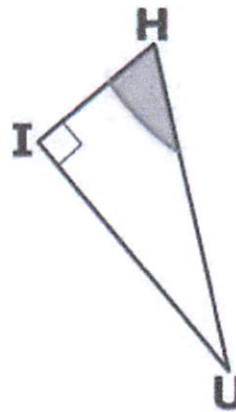
Identify

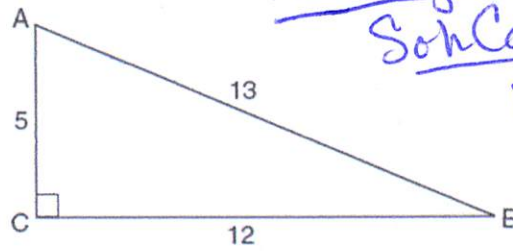7) the hypotenuse

8) the side opposite of $\angle Y$: _____

9) the side adjacent to $\angle Y$: _____

Algebra 2   Home Instruction   Name _____

7th & 9th periods Mrs. Bledsoe   3/24/2020

Part III. *Writing Sine, Cosine, Tangent Ratios*   Tuesday

Triangle Trig Review!
SohCahToa
pg 3

1) Which ratio represents cos A in the accompanying diagram of △ABC?

(1) $\dfrac{5}{13}$ (3) $\dfrac{12}{5}$

(2) $\dfrac{12}{13}$ (4) $\dfrac{13}{5}$

A, 5, 13, C, 12, B

2) Which ratio represents sin P in the accompanying triangle?
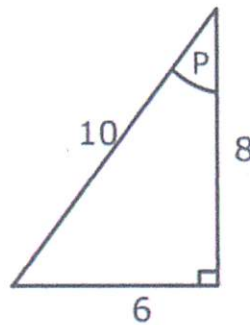
(1) $\dfrac{6}{10}$ (3) $\dfrac{6}{8}$

(2) $\dfrac{8}{10}$ (4) $\dfrac{10}{6}$

P, 10, 8, 6

3) In the accompanying diagram of right triangle ABC, AB = 8, BC = 15, AC = 17, and m∠ABC = 90.

What is tan ∠C?

(1) $\dfrac{8}{15}$ (3) $\dfrac{8}{17}$

(2) $\dfrac{17}{15}$ (4) $\dfrac{15}{17}$

A, 8, 17, B, 15, C

4) What is sin(x) ?
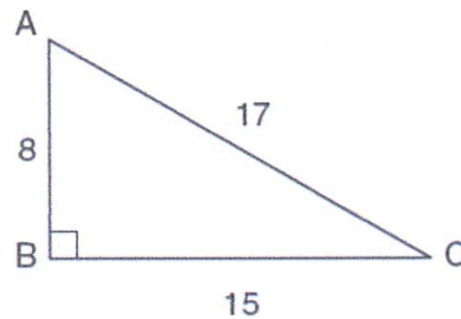
15, 8, x

Triangle Trig Review: SohCahToa (pg4)

5) What is $\sin(L)$, $\cos(L)$ and $\tan(L)$?

M   8   L

6

10

N

6) What is $\sin(a)$, $\cos(a)$ and $\tan(a)$?

B   9   R

12   a

13

T
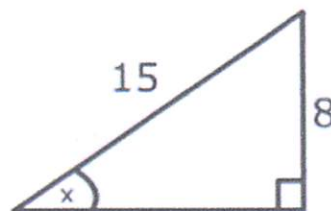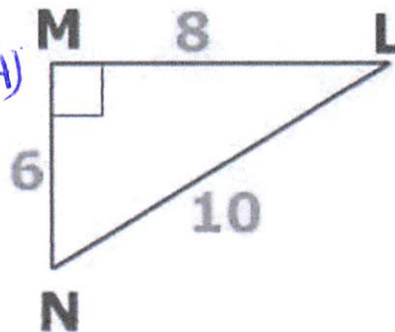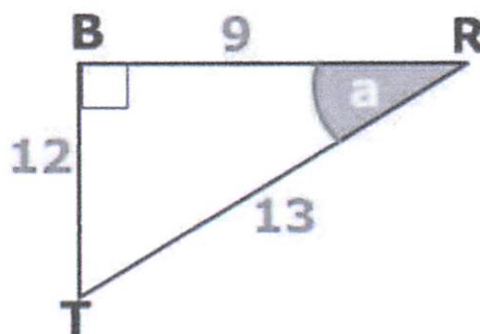
7) In triangle XYZ, $\angle y = 90°$ $XY = 7$, $YZ = 24$, and $XZ = 25$, which ratio represents cosine of $\angle x$?

(1) $\dfrac{7}{24}$ (3) $\dfrac{7}{25}$

(2) $\dfrac{24}{25}$ (4) $\dfrac{24}{7}$

8) In triangle MCT, the measure of $\angle T = 90°$, $MC = 85$ cm, $CT = 84$ cm, and $TM = 13$ cm. Which ratio represents the sine of $\angle C$?

(1) $\dfrac{13}{85}$ (3) $\dfrac{13}{84}$

(2) $\dfrac{84}{85}$ (4) $\dfrac{84}{13}$

Error Analysis

A teacher asks the class if they can express the sin(A) in Triangle 1 and the sin(b) in triangle 2.

Jose says $\sin(A) = \dfrac{4}{5}$ and sin(b) does not exist.

Jenny says $\sin(A) = \dfrac{4}{5}$ and $\sin(B) = \dfrac{2}{4.6}$

Who is correct? (explain your reasoning)

Triangle 1
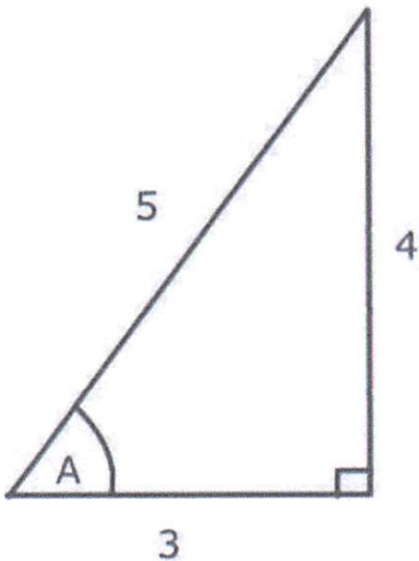
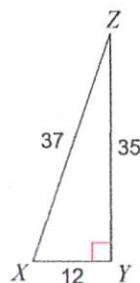Triangle 2
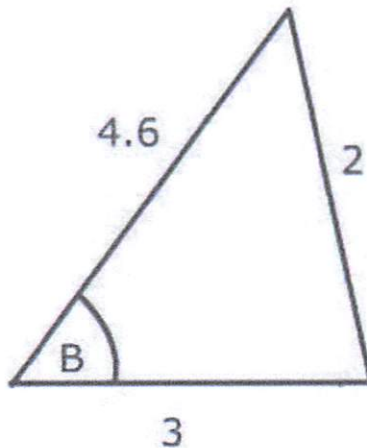
SohCahToa - Home Assignment - Day 6   Date 3/26/2020 (Thursday)
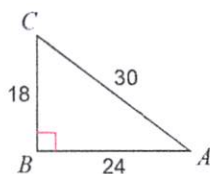
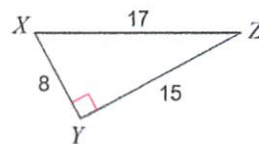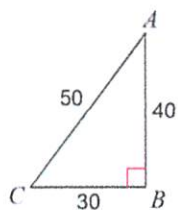**Find the value of each trigonometric ratio.**
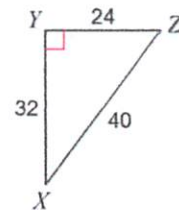
1) $\sin Z$
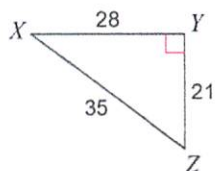
2) $\sin Z$

3) $\sin A$
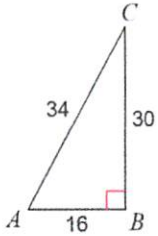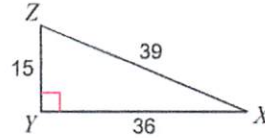

4) $\sin X$

5) $\sin A$

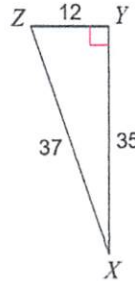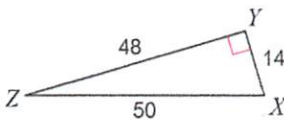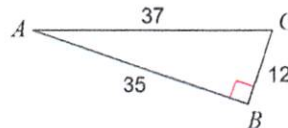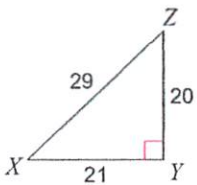6) $\sin Z$

7) $\sin Z$
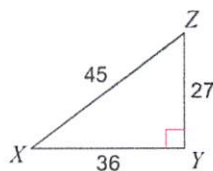
8) $\sin A$
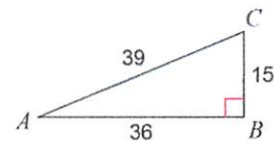
SohCahToa - Home Assignment - Day 7   Date: 3/27/2020 (Friday)

Find the value of each trigonometric ratio. Write your answers as reduced fractions.

1) $\cos C$

2) $\cos Z$

3) $\cos C$

4) $\cos Z$

5) $\cos X$

6) $\cos A$

7) $\cos X$

8) $\cos X$