

## Welcome Back MYP Math 9!

	Assignment Effort Grade (Circle One)	Comments (What was interesting or challenging?)
<b>Monday</b> Date: <u>11/27</u> Topic: <u>13D - 13E Review</u>	0 1 2	
<b>Tuesday</b> Date: _____ Topic: _____	0 1 2	
<b>Wednesday</b> Date: _____ Topic: _____	0 1 2	
<b>Thursday</b> Date: _____ Topic: _____	0 1 2	
<b>Friday</b> Date: _____ Topic: _____	0 1 2	

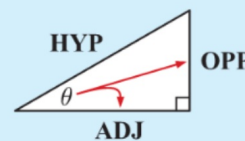
## Class Plan:

1. Mathematician Monday!
2. Practice solving sides, writing ratios, and applying trig to real-life.
3. Examine Mistakes
4. Return Quizzes

12 min

In any right angled triangle with one angle  $\theta$ , we have:

$$\sin \theta = \frac{\text{OPP}}{\text{HYP}}, \quad \cos \theta = \frac{\text{ADJ}}{\text{HYP}}, \quad \tan \theta = \frac{\text{OPP}}{\text{ADJ}}$$



Solve each proportion.

$$1) \frac{x}{8} = \frac{2}{6}$$

Solve each proportion.

$$2) \frac{4}{6} = \frac{v+6}{8v}$$

$$4(8v) = 6(v+6)$$

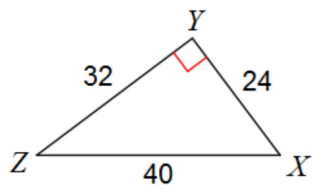
$$32v = 6v + 36$$

$$\frac{26v}{26} = \frac{36}{26}$$

$$v = 1.35$$

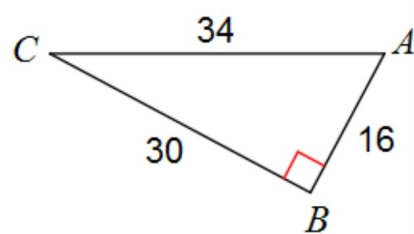
Find the value of each trigonometric ratio.

3)  $\tan Z$



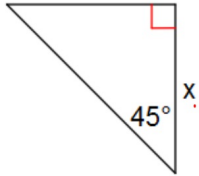
Find the value of each trigonometric ratio.

4)  $\sin A$



Find the missing side. Round to the nearest tenth.

5) ~~OPP~~  
17



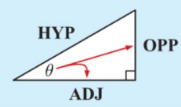
adj ~~Tan 45 = 17 / x~~

$$\frac{17}{\tan 45} = \frac{x(\tan 45)}{\tan 45}$$

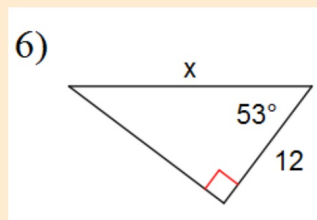
$$\frac{17}{\tan 45} = \boxed{x = 17}$$

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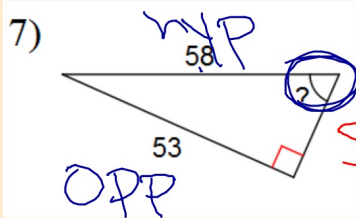


Find the missing side. Round to the nearest tenth.





Find the measure of the indicated angle to the nearest degree.



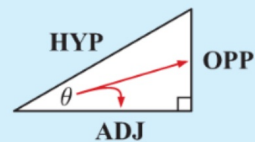
$$\sin^{-1}(\sin \theta) = \sin^{-1}\left(\frac{53}{58}\right)$$

$$\theta = \sin^{-1}\left(\frac{53}{58}\right)$$

$$\theta \approx 66^\circ$$

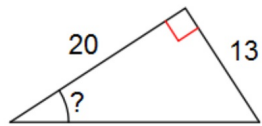
In any right angled triangle with one angle  $\theta$ , we have:

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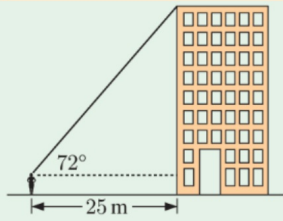


Find the measure of the indicated angle to the nearest degree.

8)



9)

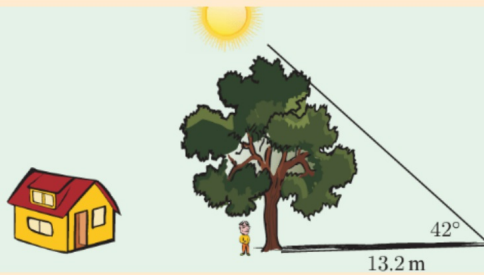


A young girl's eyes are one metre above ground level. She stands 25 m from the base of a tall building. She looks up to the top of the building at an angle of  $72^\circ$ . Find the height of the building.

10)

A tree-feller notices that the shadow cast by a tree is 13.2 m when the angle of elevation of the sun is  $42^\circ$ .

The tree is 12 m from the house. If the tree is cut at ground level and falls directly towards the house, will it miss the house?



## Solutions

1) {2.66}

2) {1.38}

3)  $\frac{3}{4}$

4)  $\frac{15}{17}$

5) 17.0

6) 19.9

7)  $66^\circ$

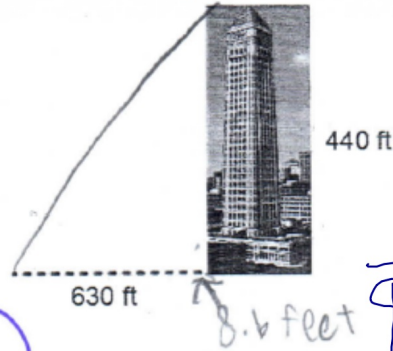
8)  $33^\circ$

9)  $\approx 77.9$  m

10) Yes, by about 11 cm.

## What is the mistake?

4. Pascal is standing in front of the Foshay Tower in downtown Minneapolis. (The tower is about 440 feet and casts a shadow of 630 ft.) His shadow is in line with the shadow of the tower. Pascal's shadow is 8.6 feet. What is his height? (Diagram is not drawn to scale).

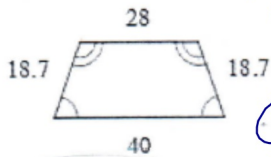
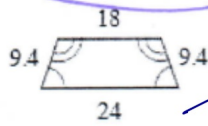


$$\frac{440}{630} = \frac{8.6}{x}$$

tower  
440 ht  
630 shadow  
X ht  
8.6 shadow

## What is the mistake?

3. Determine if the polygons are similar.  
Defend your answer using algebra and appropriate vocabulary.



$$\frac{28}{18} = 1.55$$

$$\frac{40}{24} = 1.66$$

$1.55 \neq 1.66$  **Why** are the figures not similar?  
The ratio between corresponding sides is not equal

No, Not Similar

**Exercises:**

1) Correct mistakes from quiz  
(Exemplars are posted online)

**Quiz 3.2: Friday 12 - 1**

2) Finish handout