

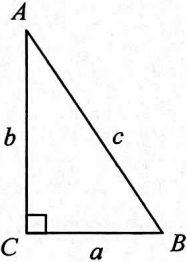
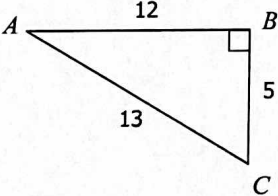
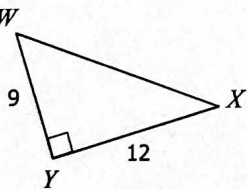
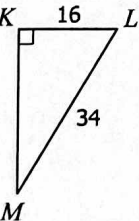
Name:

Class:

Topic:

9.4, 9.5 Notes

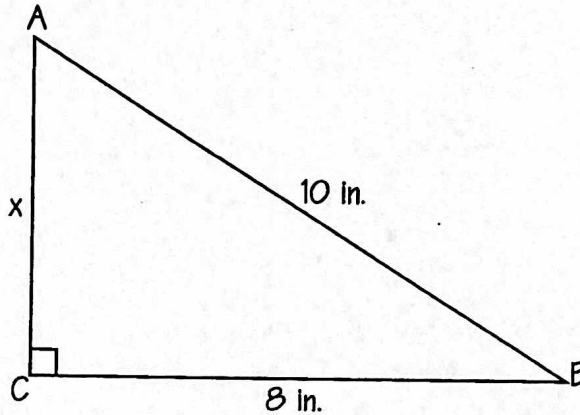
Date:

Main Ideas/Questions	Notes	
What is TRIGONOMETRY?		
<b>TRIGONOMETRIC RATIOS</b> 	Each acute angle of a right triangle has the following trigonometric ratios:	
	<b>SINE</b>	The ratio of the leg <b>opposite</b> the angle to the <b>hypotenuse</b> . <ul style="list-style-type: none"> <li>• <math>\sin A = \frac{\text{opposite}}{\text{hypotenuse}}</math></li> <li>• <math>\sin B = \frac{\text{opposite}}{\text{hypotenuse}}</math></li> </ul>
	<b>COSINE</b>	The ratio of the leg <b>adjacent</b> to the angle to the <b>hypotenuse</b> . <ul style="list-style-type: none"> <li>• <math>\cos A = \frac{\text{adjacent}}{\text{hypotenuse}}</math></li> <li>• <math>\cos B = \frac{\text{adjacent}}{\text{hypotenuse}}</math></li> </ul>
	<b>TANGENT</b>	The ratio of the leg <b>opposite</b> the angle to the leg <b>adjacent</b> to the angle. <ul style="list-style-type: none"> <li>• <math>\tan A = \frac{\text{opposite}}{\text{adjacent}}</math></li> <li>• <math>\tan B = \frac{\text{opposite}}{\text{adjacent}}</math></li> </ul>
<b>* REMEMBER!! *</b>	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; border-radius: 15px; padding: 5px; text-align: center;"> <math>\sin = \frac{\text{opposite}}{\text{hypotenuse}}</math> </div> <div style="border: 1px solid black; border-radius: 15px; padding: 5px; text-align: center;"> <math>\cos = \frac{\text{adjacent}}{\text{hypotenuse}}</math> </div> <div style="border: 1px solid black; border-radius: 15px; padding: 5px; text-align: center;"> <math>\tan = \frac{\text{opposite}}{\text{adjacent}}</math> </div> </div>	
<b>Practical</b> Give each trigonometric ratio as a fraction in simplest form.		
<b>1.</b> 	<ul style="list-style-type: none"> <li>• <math>\sin A = \frac{5}{13}</math></li> <li>• <math>\cos A = \frac{12}{13}</math></li> <li>• <math>\tan A = \frac{5}{12}</math></li> </ul>	<ul style="list-style-type: none"> <li>• <math>\sin C = \frac{12}{13}</math></li> <li>• <math>\cos C = \frac{5}{13}</math></li> <li>• <math>\tan C = \frac{12}{5}</math></li> </ul>
<b>2.</b> 	<ul style="list-style-type: none"> <li>• <math>\sin W = \frac{12}{13}</math></li> <li>• <math>\cos W = \frac{9}{13}</math></li> <li>• <math>\tan W = \frac{12}{9} = \frac{4}{3}</math></li> </ul>	<ul style="list-style-type: none"> <li>• <math>\sin X = \frac{9}{13}</math></li> <li>• <math>\cos X = \frac{12}{13}</math></li> <li>• <math>\tan X = \frac{9}{12} = \frac{3}{4}</math></li> </ul>
<b>3.</b> 	<ul style="list-style-type: none"> <li>• <math>\sin L = \frac{16}{34} = \frac{8}{17}</math></li> <li>• <math>\cos L = \frac{15}{17}</math></li> <li>• <math>\tan L = \frac{8}{15}</math></li> </ul>	<ul style="list-style-type: none"> <li>• <math>\sin M = \frac{15}{17}</math></li> <li>• <math>\cos M = \frac{8}{17}</math></li> <li>• <math>\tan M = \frac{15}{8}</math></li> </ul>

## What did the cannibal get when he was late for dinner?

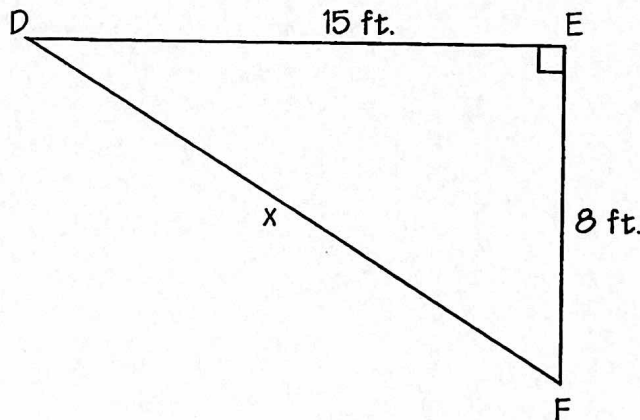
Find the missing variables and trigonometric ratios. The answer to each problem will match a letter that will allow you to figure out the joke.

- $x =$  \_\_\_\_\_
- $\sin \angle A =$  \_\_\_\_\_
- $\cos \angle A =$  \_\_\_\_\_
- $\tan \angle B =$  \_\_\_\_\_
- $\tan \angle A =$  \_\_\_\_\_



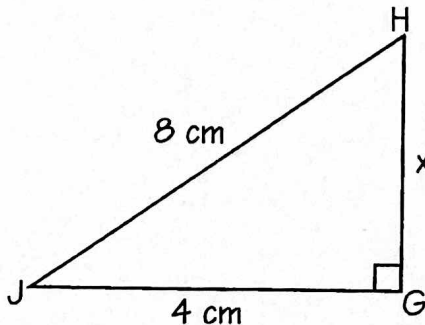
- T:  $\frac{\sqrt{3}}{2}$
- C:  $\frac{\sqrt{3}}{3}$
- O:  $\frac{4}{5}$
- R:  $\frac{15}{8}$

- $x =$  \_\_\_\_\_
- $\cos \angle D =$  \_\_\_\_\_
- $\tan \angle F =$  \_\_\_\_\_
- $\cos \angle F =$  \_\_\_\_\_
- $\tan \angle D =$  \_\_\_\_\_



- L: 6
- H:  $\frac{3}{5}$
- U:  $\frac{1}{2}$
- O: 17
- H:  $\frac{4}{3}$
- E:  $\frac{8}{17}$

- $x =$  \_\_\_\_\_
- $\tan \angle J =$  \_\_\_\_\_
- $\sin \angle J =$  \_\_\_\_\_
- $\tan \angle H =$  \_\_\_\_\_
- $\sin \angle H =$  \_\_\_\_\_



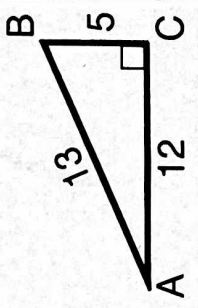
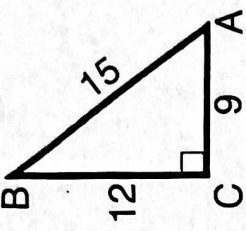
- D:  $\sqrt{3}$
- E:  $\frac{3}{4}$
- S:  $4\sqrt{3}$
- L:  $\frac{15}{17}$
- D:  $\frac{8}{15}$

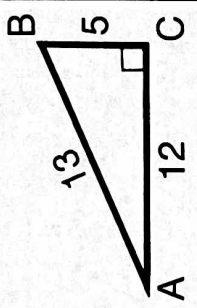
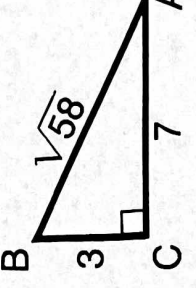
13   5   9   14   2   7   10   11   3   6   15   1   12   4   8

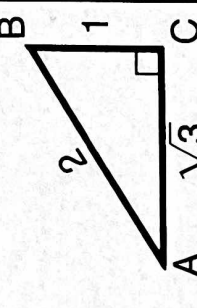
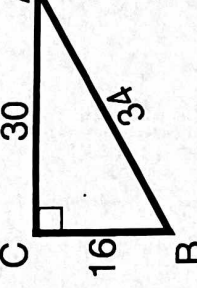
( 9.4, 9.5 (Notes continued...))

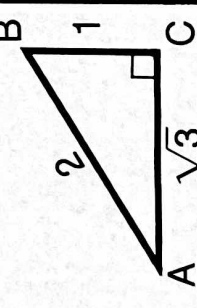
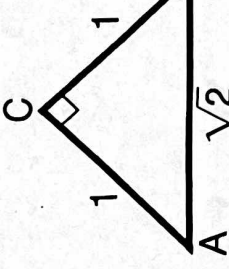
# What Did Mrs. Margarine Think About Her Sister's Husband?

For each exercise, select the correct ratio from the four choices given. Write the letter of the correct choice in the box that contains the number of that exercise.

<p>① <math>\sin A</math></p> <p>② <math>\cos A</math></p> <p>③ <math>\tan A</math></p>	<p>① <math>\frac{12}{13}</math></p> <p>② <math>\frac{5}{13}</math></p> <p>③ <math>\frac{5}{12}</math></p> <p>④ <math>\frac{13}{5}</math></p> <p>⑤ <math>\frac{13}{12}</math></p> <p>⑥ <math>\frac{12}{5}</math></p>		<p>⑬ <math>\sin A</math></p> <p>⑭ <math>\cos A</math></p> <p>⑮ <math>\tan A</math></p>	<p>① <math>\frac{5}{3}</math></p> <p>② <math>\frac{4}{3}</math></p> <p>③ <math>\frac{3}{5}</math></p> <p>④ <math>\frac{4}{5}</math></p>	
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<p>④ <math>\sin B</math></p> <p>⑤ <math>\cos B</math></p> <p>⑥ <math>\tan B</math></p>	<p>① <math>\frac{13}{5}</math></p> <p>② <math>\frac{5}{13}</math></p> <p>③ <math>\frac{12}{13}</math></p> <p>④ <math>\frac{12}{5}</math></p>		<p>⑯ <math>\sin B</math></p> <p>⑰ <math>\cos B</math></p> <p>⑱ <math>\tan B</math></p>	<p>① <math>\frac{3}{\sqrt{58}}</math></p> <p>② <math>\frac{7}{\sqrt{58}}</math></p> <p>③ <math>\frac{3}{7}</math></p> <p>④ <math>\frac{7}{3}</math></p>	
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<p>⑦ <math>\sin A</math></p> <p>⑧ <math>\cos A</math></p> <p>⑨ <math>\tan A</math></p>	<p>① <math>\frac{\sqrt{3}}{2}</math></p> <p>② <math>\frac{1}{2}</math></p> <p>③ <math>2</math></p> <p>④ <math>\frac{1}{\sqrt{3}}</math></p>		<p>⑲ <math>\sin A</math></p> <p>⑳ <math>\cos A</math></p> <p>㉑ <math>\tan A</math></p>	<p>① <math>\frac{15}{17}</math></p> <p>② <math>\frac{17}{8}</math></p> <p>③ <math>\frac{8}{17}</math></p> <p>④ <math>\frac{8}{15}</math></p>	
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<p>⑩ <math>\sin B</math></p> <p>⑪ <math>\cos B</math></p> <p>⑫ <math>\tan B</math></p>	<p>① <math>\sqrt{3}</math></p> <p>② <math>\frac{\sqrt{3}}{2}</math></p> <p>③ <math>\frac{1}{2}</math></p> <p>④ <math>\frac{1}{\sqrt{3}}</math></p>		<p>㉒ <math>\sin A</math></p> <p>㉓ <math>\cos A</math></p> <p>㉔ <math>\tan A</math></p>	<p>① <math>\frac{1}{\sqrt{2}}</math></p> <p>② <math>1</math></p> <p>③ <math>\frac{1}{\sqrt{2}}</math></p> <p>④ <math>\sqrt{2}</math></p>	
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14	3	17	6	10	23	8	1	20	12	15	7	19	24	11	5	22	13	9	2	16	21	4	18
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