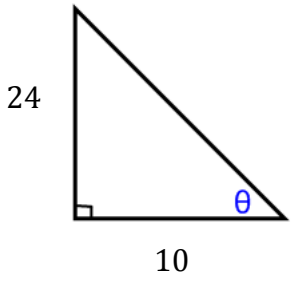
Honors Math II
Unit 9 day 1 ws
Trig ratios / special right triangles

Name_____
Period_____Date_____

Evaluate the six trigonometric functions of the angle θ.

1.



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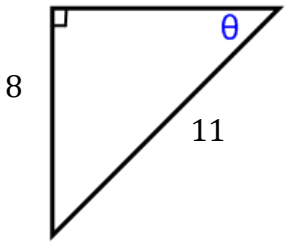


Let θ be an acute angle of a right triangle. Find the values of the other five trigonometric functions of θ.

3. $\sin\theta = \frac{4}{5}$

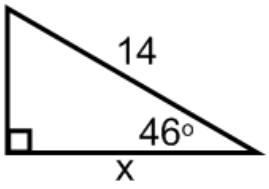
4. $\cos\theta = \frac{5}{13}$

5. $\tan\theta = \frac{7}{3}$

6. $\csc\theta = \frac{10}{6}$

Find x. Round to the nearest hundredth.

7.



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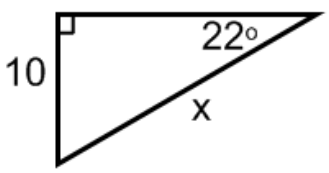


9. In a 45^o - 45^o - 90^o triangle, the ratio of the length of the hypotenuse to the length of a side is:

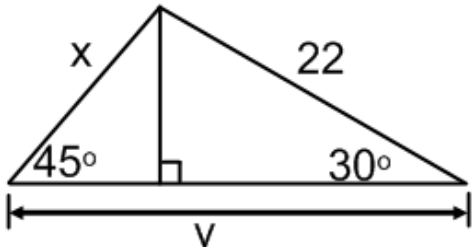
_____

10. In a 30^o - 60^o - 90^o triangle, the ratio of the length of the hypotenuse to the length of the shorter side is:

_____

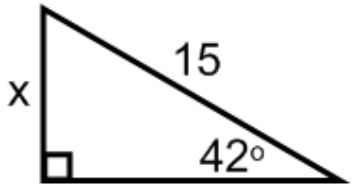
11. The shorter leg of a 30^o - 60^o - 90^o triangle is 8.5 feet long. Find the perimeter.

12. Find the value of x and y.



Find x. Round to the nearest hundredth.

13.



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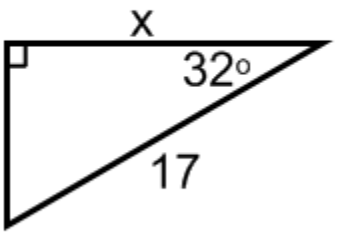

15. A 220 ft string attached to a kite makes a 30^o angle with the ground. What is the height of the kite to the nearest tenth?

16. A tree 19 feet tall casts a shadow which forms an angle of 49^o with the ground. How long is the shadow to the nearest hundredth?

17. A slide 4.1 m long makes an angle of 27^o with the ground. How high is the top of the slide above the ground?

18. Liola drives 16 km up a hill that is at a grade of 10^o. What horizontal distance, to the nearest tenth of kilometer, has she covered?

Solve for x.

19. $\frac{18}{x^2-3x} - \frac{6}{x-3} = \frac{5}{x}$

20. $\frac{6x}{x+4} + 4 = \frac{2x+2}{x-1}$

21. $\frac{9}{x^2-6x+9} = \frac{3x}{x^2-3x}$

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

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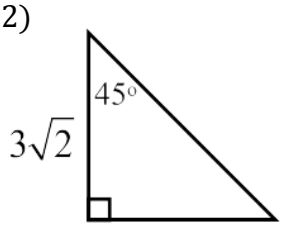

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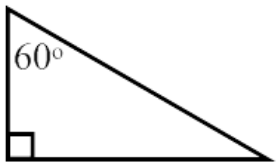
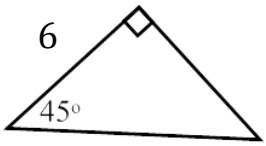


$\frac{5\sqrt{3}}{2}$

24)



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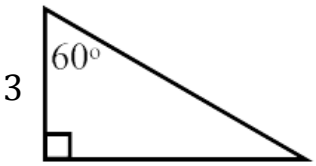

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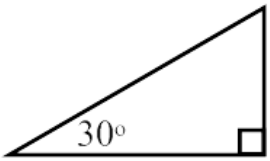
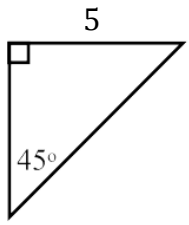


$2\sqrt{3}$

27)



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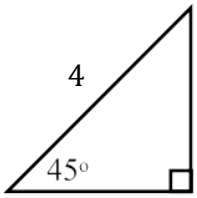

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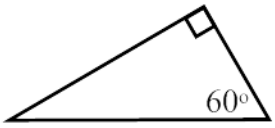
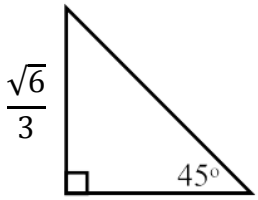


$\frac{8}{3}$

30)



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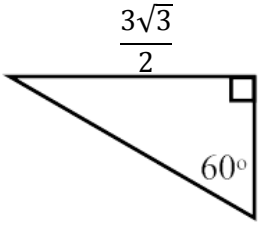

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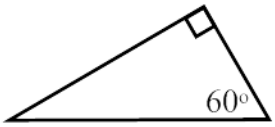
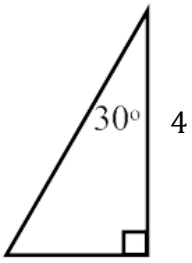


$\frac{8\sqrt{3}}{3}$

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