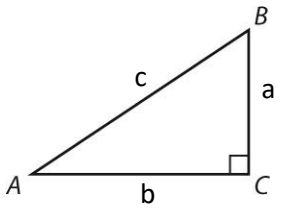
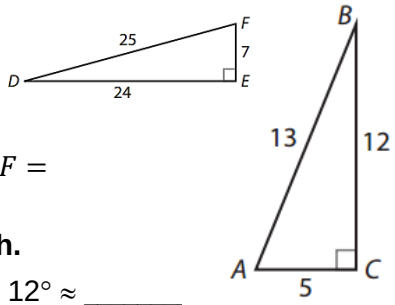
For Problems 1–8, identify the features of the right triangle. (use lower case letters)

1. the hypotenuse _____
2. the legs _____
3. the side opposite $\angle A$ _____
4. the side opposite $\angle B$ _____
5. the side adjacent to $\angle A$ _____
6. the side adjacent to $\angle B$ _____
7. the tangent of $\angle A$ _____
8. the tangent of $\angle B$ _____



For 9-18, write each trigonometric ratio as a fraction and as a decimal, rounded to the nearest thousandth.

9. $\sin A =$
10. $\cos A =$
11. $\cos B =$
12. $\tan A =$
13. $\tan B =$
14. $\sin D =$
15. $\cos F =$
16. $\sin F =$
17. $\tan D =$
18. $\tan F =$



Use a calculator to find each tangent. Round to the nearest hundredth.

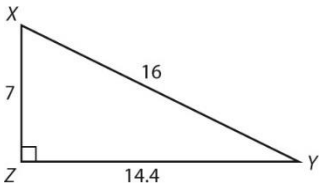
19. $\tan 81° \approx$ _____
20. $\tan 38° \approx$ _____
21. $\tan 12° \approx$ _____

The inverse tangent of *x* is the angle whose tangent is *x*. Use a calculator to find each inverse tangent. Round to the nearest 0.1 degree. Check your work by finding the tangent of each answers.

22. $\tan^{-1}0.65 \approx$ _____
23. $\tan^{-1}\frac{13}{7} \approx$ _____
24. $\tan^{-1}0.4 \approx$ _____

$\tan$ _____ ≈ 0.65 $\tan$ _____ $\approx \frac{13}{7}$ $\tan$ _____ ≈ 0.4

Use the figure to the right for problems 25–28. Write the sines and cosines as ratios and as decimals to the nearest hundredth.



25. $\sin X = \frac{\square}{\square} =$ _____
26. $\sin Y = \frac{\square}{\square} =$ _____
27. $\cos X = \frac{\square}{\square} =$ _____
28. $\cos Y = \frac{\square}{\square} =$ _____

29. When you know the sine of an angle, you can find the measure of the angle in degrees by using the inverse sine, $\sin^{-1}$. Describe how to find the inverse sine of the number *n* on your calculator.

_____

30. In Problem 25 you found the sine of $\angle X$. Use your calculator to find the inverse sine of $\angle X$, which is the measure of $\angle X$. _____

31. Show how to use a different inverse to find m$\angle X$. (Use your answer from Problem 27.)

_____

32. If you calculated m$\angle X$ correctly, what is m$\angle Y$? _____

Confirm your answer by using the inverse cosine. _____