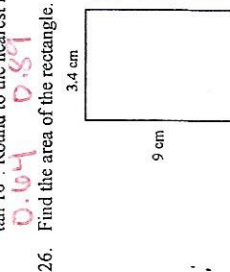


22. Vinay is building a ramp for loading furniture onto a truck. The trailer is 2.8 feet off of the ground. To avoid making it too difficult to roll furniture up the ramp, he decides to make the angle between the ramp and the ground  $15^\circ$ . Find the length of the ramp  $r$  to the nearest hundredth of a foot.



$\sin 15^\circ = \frac{2.8}{r}$   $r = 10.88$

24. Write the converse of the statement, "If a molecule is a water molecule, then it is made up of oxygen and hydrogen." *If a molecule is not made up of oxygen and hydrogen, then it is not a water molecule.*
25. Use a calculator to evaluate  $\sin 40^\circ$ ,  $\cos 27^\circ$ , and  $\tan 16^\circ$ . Round to the nearest hundredth.  
 $0.64$   $0.89$   $0.29$



$A = bh$   
 $A = 9(3.4)$   
 $A = 30.6 \text{ cm}^2$

27. Find the measure of each interior angle of a regular 40-gon.  $\frac{180(n-2)}{40} = 171^\circ$

31. Write the converse of the statement, "If a molecule is a water molecule, then it is made up of oxygen and hydrogen." *If a molecule is made of hydrogen and oxygen, then it is a water molecule.*

32. Use your calculator to find the acute angle measures  $\sin^{-1}(0.65)$ ,  $\cos^{-1}(0.6)$ , and  $\tan^{-1}(43.5)$  to the nearest tenth of a degree.  
 $40.5$   $53.1$   $88.7$

33. Give the sine, cosine, and tangent of  $\angle B$ .

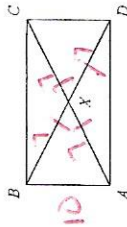
$\sin B = \frac{105}{137}$

$\cos B = \frac{88}{137}$

$\tan B = \frac{105}{88}$

23. An artist designs a rectangular quilt piece with different types of ribbon that go from the corner to the center of the quilt. The dimensions of the rectangle are  $AB = 10$  inches and  $AC = 14$  inches. Find  $BX$ .

$BX = 7$



28. Find the area of the parallelogram.



$A = bh$   
 $A = 7.5(20)$   
 $A = 150 \text{ in}^2$

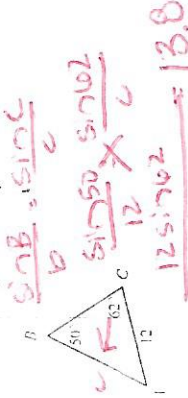
29. Find the measure of each interior angle of a regular pentagon.

30. A tree casts a shadow of 21 meters when the angle of elevation of the sun is  $27^\circ$ . Find the height of the tree to the nearest meter.



$\tan 27^\circ = \frac{x}{21}$   
 $x = 10.7 \text{ m}$

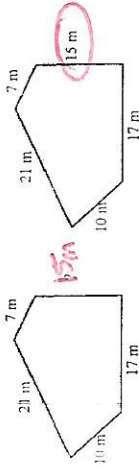
34. Find  $\angle B$ . Round your answer to the nearest tenth.



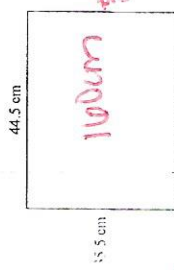
35. Find the measure of each exterior angle of a regular pentagon.  $\frac{360}{5} = 72^\circ$

36. Determine the conclusion of the statement "If  $p$ , then  $q$ ".

39. Determine the missing measure in the set of congruent polygons.

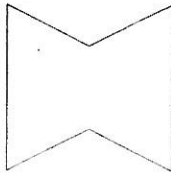


40. Find the perimeter of the rectangle.



$44.5 + 15.5 = 60$

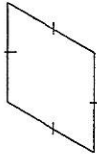
41. Tell whether the polygon is regular or irregular. Tell whether it is concave or convex.



irregular  
concave

37. Classify the quadrilateral. Give as many names as possible.

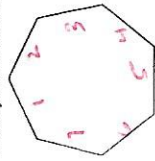
parallelogram  
rhombus  
kite



38. Given a conditional statement of the form "If  $x$ , then  $y$ ", what form is its contrapositive?

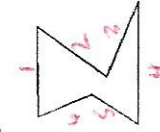
If not  $y$ , then not  $x$ .

42. Find the sum of the interior angle measures by dividing the polygon into triangles. If necessary, round your answer to the nearest hundredth.



$\frac{180(7-2)}{1} = 900^\circ$

43. Classify the polygon, and tell whether it is a regular polygon.



hexagon  
irregular  
concave