Answer questions 1 to 5 according to the given graph

|  |  |
| --- | --- |
| 1. What is the right angle? \_\_\_\_\_\_
2. What is $m∢A+m∢B+m∢C$? \_\_\_\_\_\_
3. What is the hypotenuse? \_\_\_\_\_\_
4. Select the correct statement
	1. $SinA=\frac{altitude}{distance to runway}$
	2. $CosA=\frac{altitude}{distance to runway}$
	3. $TanA=\frac{altitude}{distance to runway}$
	4. $TanB=\frac{altitude}{distance to runway}$
5. To find the length of $\overbar{AB}$ you should:
	1. Add the lengths from each leg.
	2. Use the Pythagorean Theorem.
	3. Multiply base times height divided 2.
	4. Pray every night.
 |  |

1. Write a trigonometric ratio that involves the given data. Look at the example

|  |  |  |  |
| --- | --- | --- | --- |
| EXAMPLE: $TanA=\frac{y}{x}$ |  |  |  |

Solve each situation

1. A 20-foot ladder leaning against a vertical wall reaches to a height of 16 feet. What is the sine of the angle that the ladder makes with the ground? Draw a picture about the situation.
2. An access ramp reaches a doorway that is 2.5 feet above the ground. If the ramp is 10 feet long, what is the sine of the angle that the ramp makes with the ground? Draw a picture about the situation.
3. A man is lying on the beach, flying a kite. He holds the end of the kite string at ground level, and estimates the angle of elevation of the kite to be $50°$. If the string is 450 ft long, how high is the kite above the ground? Draw a picture about the situation.
4. A biologist wants to know the width $w$ of a river so that instruments for studying thepollutants in the water can be set properly. From point $A, $the biologist walks downstream 100 feet and sights to point $C $(see figure). From this sighting, it is determined that $θ=54°$. How wide is the river?