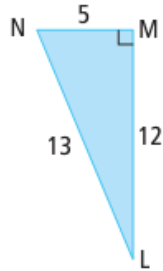


*The Tangent Ratio*

Show You Know

<p>Ex. 1</p> <p>Calculate each trigonometric ratio.</p> <p>a) <math>\tan L</math></p> <p>b) <math>\tan N</math></p>	<p>Ex. 2</p> <p>Calculate each tangent ratio and angle.</p> <table border="1" style="margin: 10px 0;"> <thead> <tr style="background-color: #c8e6c9;"> <th><math>\theta</math></th> <th><math>\tan \theta</math></th> </tr> </thead> <tbody> <tr> <td><math>27^\circ</math></td> <td></td> </tr> <tr> <td><math>45^\circ</math></td> <td></td> </tr> <tr> <td><math>57^\circ</math></td> <td></td> </tr> </tbody> </table> <table border="1" style="margin: 10px 0;"> <thead> <tr style="background-color: #c8e6c9;"> <th><math>\theta</math></th> <th><math>\tan \theta</math></th> </tr> </thead> <tbody> <tr> <td></td> <td>0.5095</td> </tr> <tr> <td></td> <td>0.5543</td> </tr> <tr> <td></td> <td>1.4653</td> </tr> </tbody> </table>	$\theta$	$\tan \theta$	$27^\circ$		$45^\circ$		$57^\circ$		$\theta$	$\tan \theta$		0.5095		0.5543		1.4653
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<p>Ex. 3</p> <p>A ladder leaning against a wall forms an angle of <math>63^\circ</math> with the ground. How far up the wall will the ladder reach if the foot of the ladder is 2 m from the wall? Draw a picture to help visualize.</p>	<p>Ex. 4</p> <p>A radio transmission tower is to be supported by a guy wire. The wire reaches 30 m up the tower and is attached to the ground a horizontal distance of 14 m from the base of the tower. What angle does the guy wire form with the ground, to the nearest degree?</p>																



Practice

1.
  - a. If  $a = 10$  cm and  $b = 12$  cm, what is the value of  $\tan A$ ?
  - b. If  $a = 1.9$  m and  $b = 2.4$  m, what is the value of  $\tan B$ ?
  - c. If  $\tan A = \frac{5}{6}$  and  $a = 15$  cm, what is the value of  $b$ ?

