CONNECTING AND COMMUNICATING WHAT WE KNOW ABOUT: <u>RELATED RATES</u>

		1
VERBAL SITUATION		EQUATIONS
A ladder 25 feet long is leaning against the outside wall of a house. The base/bottom of the ladder is pulled away from the wall at a rate of 2 feet per second.		 (a) Write an equation that relates the relevant variables of the problem situation:
DRAWING: Make a sketch of the situation, labeling all variables and/or relevant quantities		(b) Write the general calculus equation that relates the rates of change of these variables.
ТА	BLE	ANALYSIS
Fill in the table showing how fast the top of the ladder moves down the wall, when its base is <i>x</i> feet from the wall.		(a) Consider the triangle formed by the side of the house, the ladder and the ground. Is the area of the triangle increasing or decreasing when the base of the ladder is seven feet from the
Distance of base of ladder from the wall	Rate at which ladder moves down the wall	wall? Explain your answer.
X		
7		(b) Find the rate at which the angle between the ladder and the wall of the house is changing when the base of the ladder is 7 feet from the wall.
15		
24		
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