

Related Rates

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Set up the related rate problem by:

- 1) Drawing the diagram.
- 2) Read the problem and write "Find = ", "When = ", and "Given = " with the appropriate information.
- 3) Write the Relating Equation and find the derivative of both sides of the equation remembering to put $\frac{d(\text{something})}{dt}$ for the variables that change with respect to time.
- 4) Substitute in "Given" and "When", then solve for "Find".

**1. The top of a 25-foot ladder is sliding down a vertical wall at a constant rate of 3 feet per minute. When the top of the ladder is 7 feet from the ground, what is the rate of change of the distance between the bottom of the ladder and the wall?