1. What is slope (the definition)?

\[
\text{Ratio of change in output} = \frac{\Delta y}{\Delta x}
\]

2. Find the slope of the line below. Give the units of the slope and give a situation it might describe.

\[
m = \frac{30 - 0}{1 - 0} = \frac{30 \text{ miles}}{1 \text{ hr.}} = 30 \text{ mph}.
\]

3. Find the slope of the line below. Give the units of the slope and give a situation it might describe.

\[
m = \frac{300}{5 \text{ days}} = 60 \text{ $/day}.
\]

4. Use the graph below to answer these questions.

(a) What is the slope? \[ \frac{1}{5} \rightarrow 0.2/1 \]

(b) What does the slope tell you? Include units in your answer.

For every 5 miles it costs $1. \[ \$20 \text{ per mile.} \]

(c) What is the meaning of the point (0, 2)?

It costs $2 before you go anywhere like a gas fare.
Captain Dood's airplane flight is plotted below. Try to answer these questions. Be sure to include units.

(a) What is the highest she flew? 80 km

(b) How long did it take her to get there? 4 min

(c) What was her rate of climb? \( \frac{8}{4} = \frac{2 \text{ km}}{1 \text{ min}} = 2 \text{ km/min} \)

(d) How long did she stay at her highest? 4 min

(e) What was her rate of descent when she started coming down (at \( t = 8 \) minutes)? \( -\frac{3 \text{ km}}{4 \text{ min}} = 0.75 \text{ km/min} \)

(f) What was happening for the 6 minutes between \( t = 12 \) and \( t = 18 \)?

**FLYING AT A CONSTANT ALTITUDE.**