

Application WEATHER For Exercises 12–14, use the table that shows the temperatures at different times on March 23, 2002.

Time	8:00 A.M.	10:00 A.M.	12:00 P.M.	2:00 P.M.	4:00 P.M.
Temp ($^{\circ}\text{F}$)	36	47	55	58	60

- What was the average rate of change of the temperature from 8:00 A.M. to 10:00 A.M.?
- What was the average rate of change of the temperature from 12:00 P.M. to 4:00 P.M.?
- During what 2-hour period was the average rate of change of the temperature the least?

Find the slope of the line that passes through each pair of points.

- $(6, 1), (8, -4)$
- $(-6, -5), (4, 1)$
- $(7, 8), (1, 8)$
- $(2.5, 3), (1, -9)$
- $\left(\frac{1}{2}, -\frac{1}{3}\right), \left(\frac{1}{4}, \frac{2}{3}\right)$
- $(a, 2), (a, -2)$
- $(6, 8), (5, -5)$
- $(2, -7), (4, 1)$
- $(-2, -3), (0, -5)$
- $(4, -1.5), (4, 4.5)$
- $\left(\frac{1}{2}, \frac{2}{3}\right), \left(\frac{5}{6}, \frac{1}{4}\right)$
- $(3, b), (-5, b)$
- Determine the value of r so that the line through $(6, r)$ and $(9, 2)$ has slope $\frac{1}{3}$.
- Determine the value of r so that the line through $(5, r)$ and $(2, 3)$ has slope 2.

ANCIENT CULTURES Mayan Indians of Mexico and Central America built pyramids that were used as their temples. Ancient Egyptians built pyramids to use as tombs for the pharaohs. Estimate the slope that a face of each pyramid makes with its base.



The Pyramid of the Sun in Teotihuacán, Mexico, measures about 700 feet on each side of its square base and is about 210 feet high.



The Great Pyramid in Egypt measures 756 feet on each side of its square base and was originally 481 feet high.