1

2

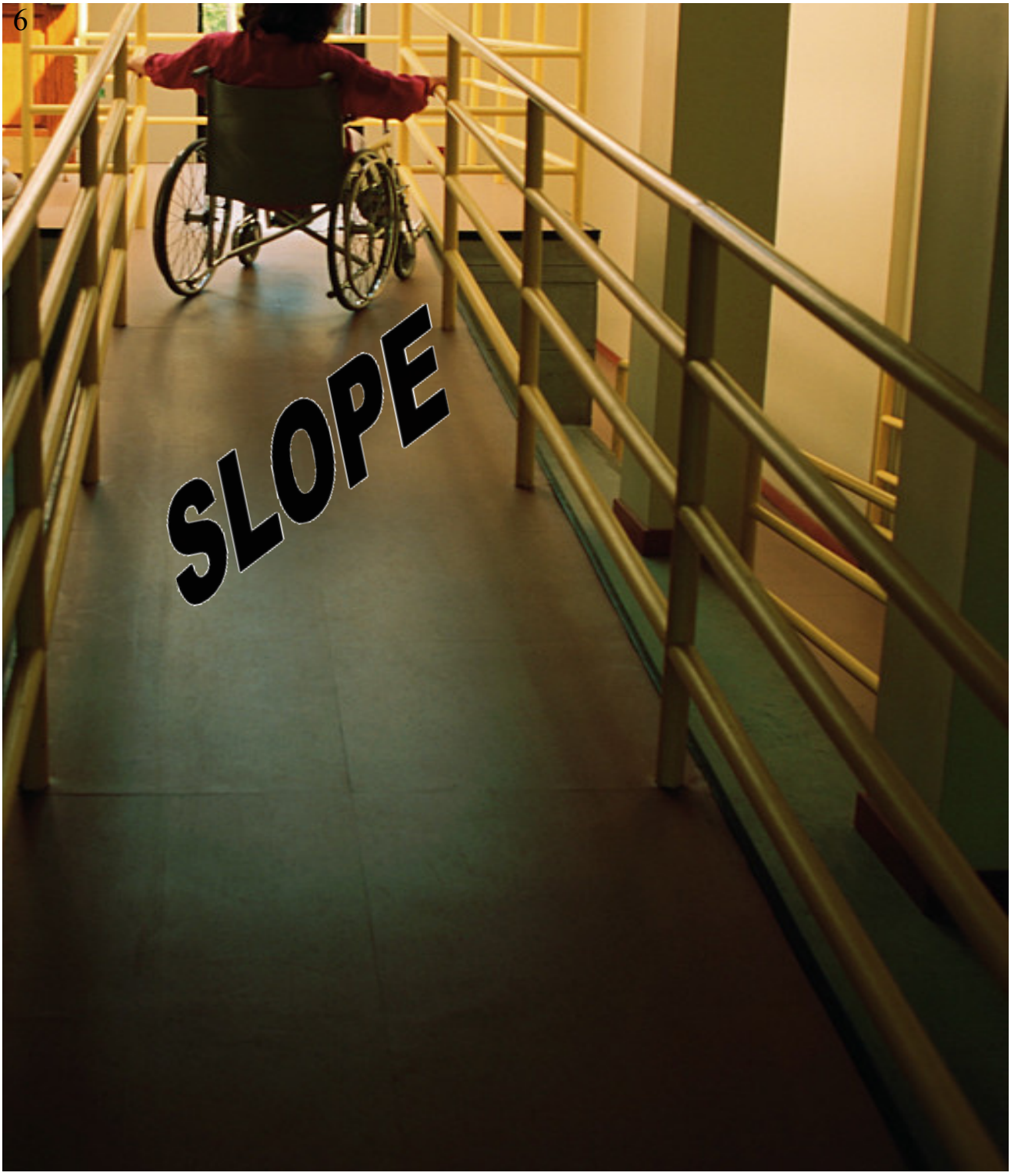

3
SLOPE

8

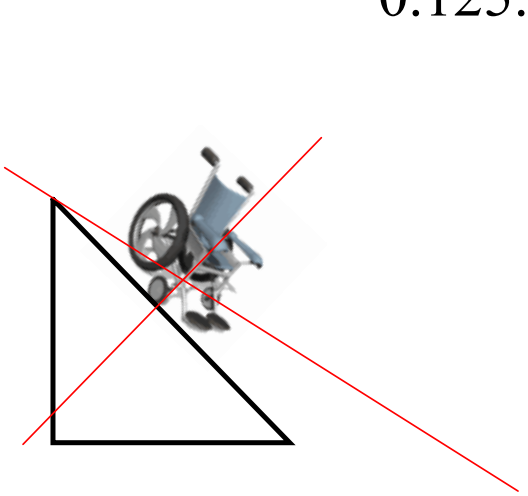
Building stairs
should
not exceed
a slope of
0.83

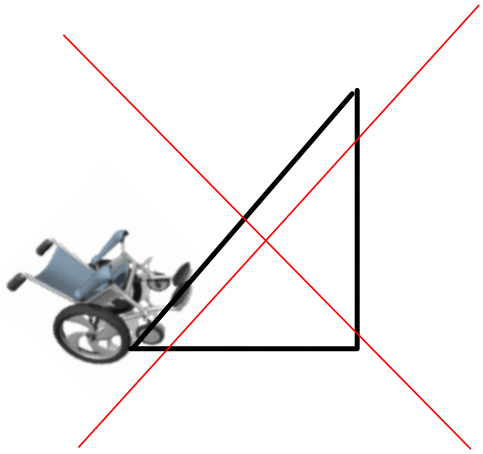
5

6



A wheelchair ramp should not exceed a slope of 0.125.





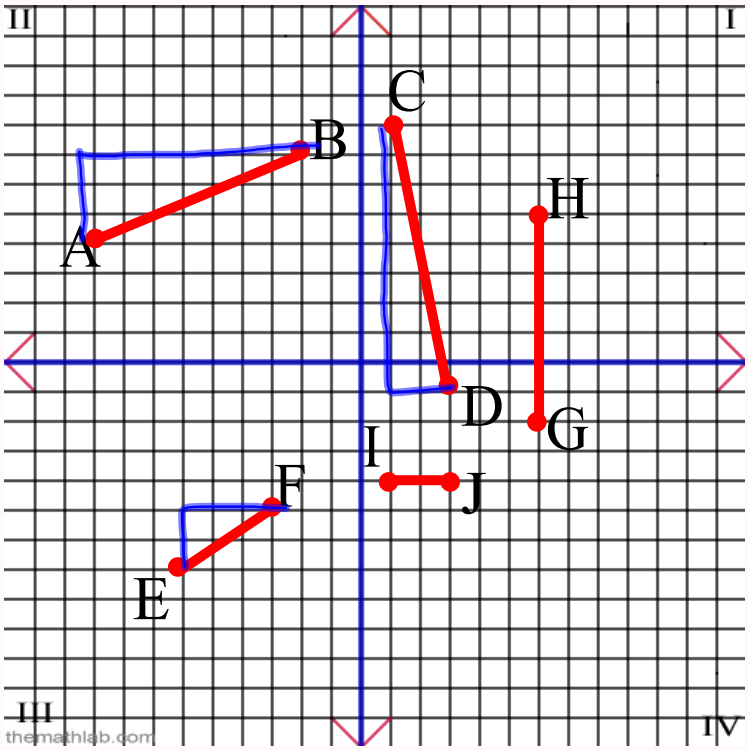
Types of Slope

Calculating slope!

$$\text{slope} = \frac{\text{rise}}{\text{run}}$$

$$m = \frac{\text{rise}}{\text{run}}$$

11



slope = $\frac{\text{rise}}{\text{run}}$

This is used when you can see the graph!

left to right

AB = $\frac{3}{7}$

CD = $-\frac{9}{2}$

EF = $\frac{2}{3}$

GH = $\frac{7}{0}$ = undefined

IJ = $\frac{0}{2} = 0$

Slope of a Horizontal Line = 0

= 0 or $\frac{0}{1}$

Slope of a Vertical Line = Undefined or 1/0

= 1/0 or Undefined

Calculating slope!

$$slope = \frac{y_2 - y_1}{x_2 - x_1}$$

Calculating slope!

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

Find the slope of a line passing through the points (2,-3) and (-5,8).

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

(x, y)

This is used when you are given co-ordinates.

1st $(x_1, y_1) = (2, -3)$ 2nd $(x_2, y_2) = (-5, 8)$

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$m = \frac{8 + +3}{-5 - 2}$$

$$m = \frac{11}{-7}$$

Find the slope of a line passing through the points (-5, -7) and (-3,9).

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

1st $(-5, -7)$ and $(-3, 9)$ — x_1, y_1 and x_2, y_2

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$m = \frac{9 + 7}{-3 + 5}$$

$$m = \frac{16}{2}$$

$$m = \frac{8}{1}$$

1st $(-3, 9)$ $(-5, -7)$ — x_1, y_1 and x_2, y_2

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$m = \frac{-7 - 9}{-5 + 3}$$

$$m = \frac{-16}{-2}$$

$$m = \frac{8}{1}$$

Find the slope of a line passing through the points (6, -4) and (-2,10).

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

1st $(x_1, y_1) = (6, -4)$ and $(x_2, y_2) = (-2, 10)$

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$m = \frac{10 + +4}{-2 - 6}$$

$$m = \frac{14}{-8}$$

$$m = -\frac{7}{4}$$

Calculate the slope.

1. (3,5) (2,8)

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$m = \frac{8-5}{2-3}$$

$$m = \frac{3}{-1}$$

$$m = \frac{-3}{1_1}$$

2. (-9,-2) (7,3)

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$m = \frac{3-(-2)}{7-(-9)}$$

$$m = \frac{3+2}{7+9}$$

$$m = \frac{5}{16}$$

3. (-1,2) (0,-4)

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$m = \frac{-4-2}{0-(-1)}$$

$$m = \frac{-4-2}{0+1}$$

$$m = \frac{-6}{1}$$