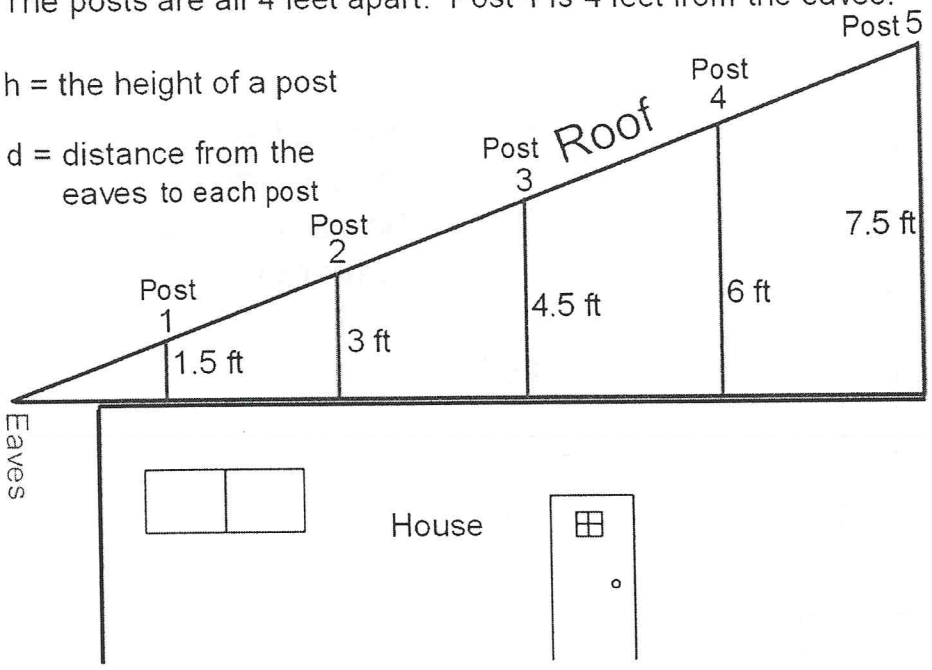
The posts are all 4 feet apart. Post 1 is 4 feet from the eaves.

h = the height of a post

d = distance from the eaves to each post

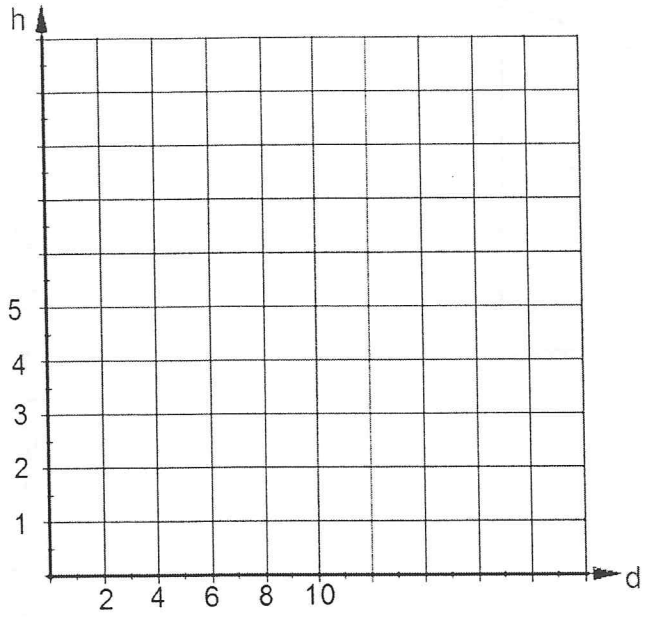


ALG 2 BELLWORK
FRI. DEC 19, 2014

POST	d	h	$\frac{h}{d}$
1		1.5	
2		3	
3		4.5	
4		6	
5		7.5	

Find the ratio $\frac{h}{d}$ for each post.

Make a scatter plot of the data in the table.



d	h
	1.5
	3
	4.5
	6
	7.5

Draw a trend line through the data on the scatter plot.

Use the graphing calculator to do a linear regression and find the equation of the trend line.

EQ:

Use this equation to predict the height of a post that is 32 feet from the eaves.

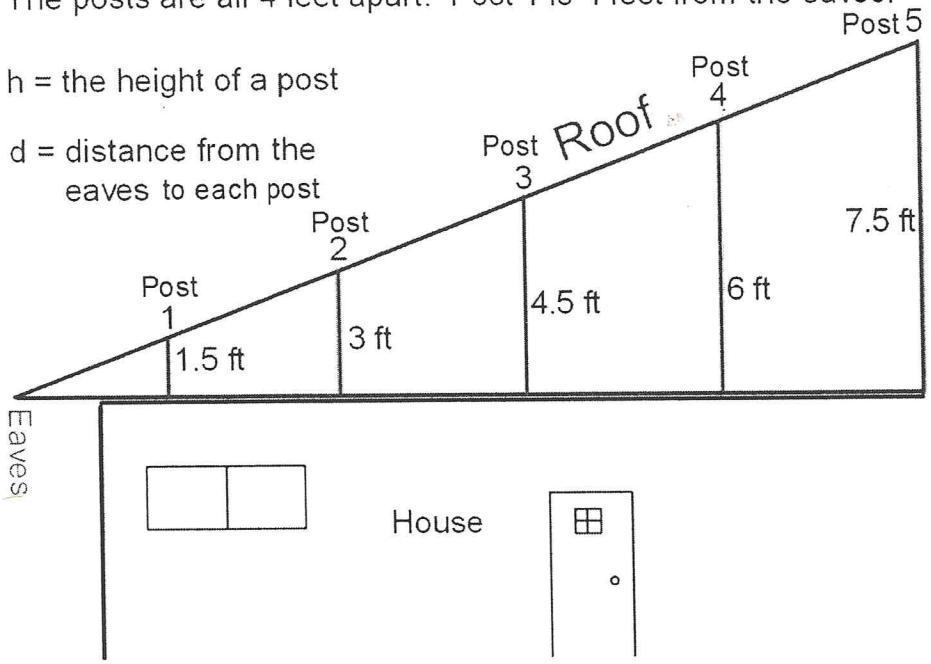
Use this equation to predict the distance from the eaves you should place a post that is 16.5 ft. tall.

Answers

The posts are all 4 feet apart. Post 1 is 4 feet from the eaves.

h = the height of a post

d = distance from the eaves to each post

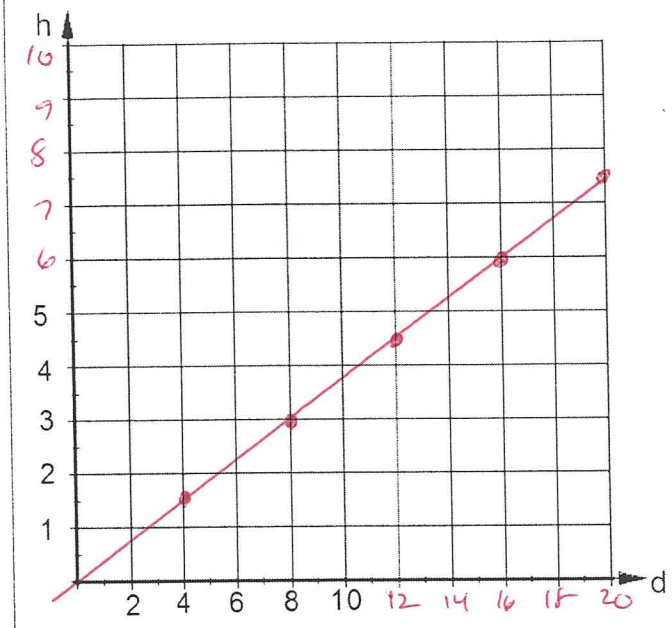


ALG 2 BELLWORK
FRI. DEC 19, 2014

POST	d	h	$\frac{h}{d}$
1	4	1.5	$\frac{1.5}{4} = .375$
2	8	3	$\frac{3}{8} = .375$
3	12	4.5	$\frac{4.5}{12} = .375$
4	16	6	$\frac{6}{16} = .375$
5	20	7.5	$\frac{7.5}{20} = .375$

Find the ratio $\frac{h}{d}$ for each post.

Make a scatter plot of the data in the table.



d	h
4	1.5
8	3
12	4.5
16	6
20	7.5

Draw a trend line through the data on the scatter plot.

Use the graphing calculator to do a linear regression and find the equation of the trend line.

EQ: $y = .375x \rightarrow h = .375d$

Use this equation to predict the height of a post that is 32 feet from the eaves.

d

$h = (.375)(32) =$ 12 ft tall

Use this equation to predict the distance from the eaves you should place a post that is 16.5 ft. tall.

h

$$\frac{16.5}{.375} = \frac{.375d}{.375}$$

$d =$ 44 ft from the eaves