



## HOT SAUCE!

### Is Mr. Davis' perceived heat rating proportional to the Scoville heat rating?

After his first hot sauce taste test, professional taste-tester Wilbur Davis is now addicted to hot sauce! He can't get enough. He has again signed up with Screamin' Hot Hot Sauce Company to test the new sauces!

Marty and Jeanette, of the Screamin' Hot Hot Sauce Company, are still aiming for a proportional relationship between the human-perceived heat rating and the Scoville heat rating.

Use Marty's notes to determine if Mr. Davis' perceived heat rating is proportional to the Scoville heat rating, and explain your reasoning.

#### 7.RP.A.2a

##### About this standard

Decide whether two quantities are in a proportional relationship, (e.g. by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin).

Screamin' Hot Hot Sauce Co.		
Hot Sauce	Scoville Heat Rating	Human Perceived Heat Rating
Head Shakin'	0	0
Nose Scratchin'	50,000	24
Jaw Droppin'	100,000	48
Eye Poppin'	150,000	72
Face Meltin'	200,000	96

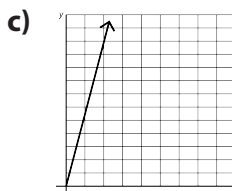
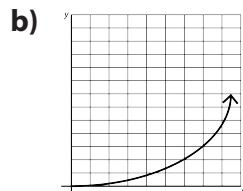
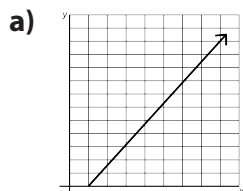
# APPLYING THE STANDARD

How might this standard appear on a test?



CHECK OUT MY WORKED EXAMPLE #10

1) Look at each representation and determine whether  $y$  is proportional to  $x$ . Write either *proportional* or *not proportional*.



d) 

$x$	0	2	5	7	10
$y$	0	6	9	11	14

e)  $1.5x = y$

f)  $y = 5x + 2$

g)  $y = 20x$

h) 

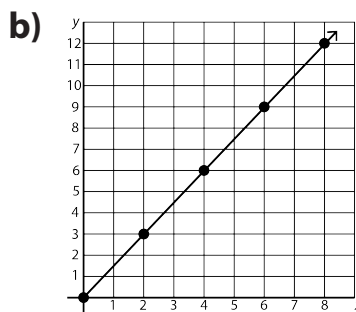
$x$	1	3	4	6	12
$y$	8	24	32	48	96

2) The graph and the table each show a proportional relationship.

a) 

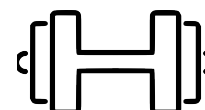
$x$	$y$
0	0
2	58
5	145
7	203
15	435

 Determine another ordered pair in this data set. Write the coordinates.  
\_\_\_\_\_



Determine another point on the line. Write the coordinates.  
\_\_\_\_\_

3) Workout World charges gym members \$10 to sign up and then \$20 every month. Good-To-Be-Fit charges their members \$30 per month, with no sign-up fee.



a) For each company, complete the table showing the total amount paid over six months. Then write an equation that models the total cost ( $y$ ) for any number of months ( $x$ ).

Workout World Gym Costs						
Number of Months	1	2	3	4	5	6
Total Cost (\$)						

Good-To-Be-Fit Gym Costs						
Number of Months	1	2	3	4	5	6
Total Cost (\$)						

Equation: \_\_\_\_\_

Equation: \_\_\_\_\_

b) For which company is the total cost proportional to the number of months? How do you know?