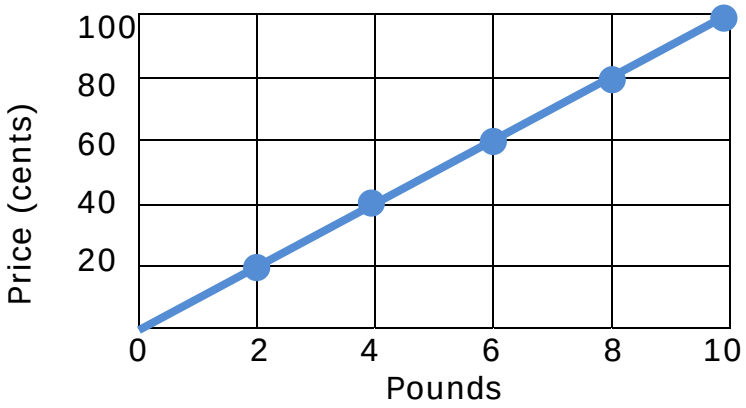
Name _____ Date _____

The Constant of Proportionality Step-by-Step Lesson

The graph below represents the price of the strawberry at one store. What is the constant of proportionality?



Explanation: Step 1) the graph of a proportional relationship is a straight line that passes through the origin. Proportional quantities can be described by the equation $y = kx$, where k is a constant ratio.

Step 2) we can tell that the relationship is directly proportional by looking at the graph. The graph is a straight line and it passes through the origin. So, the relationship is directly proportional.

First, create a chart. Use points from the graph, such as (2, 20), (4, 40), (6, 60), (8, 80) and (10, 100)..

Total Price (y)	20	40	60	80	100
Total Pounds (x)	2	4	6	8	10

Now divide "Total price (y)" by "Number of pounds (x)" to find the ratio (k).

Total Price (y)	20	40	60	80	100
Total Pound (x)	2	4	6	8	10
Ratio (K)	1:10 (for all)				

The ratio is constant (k = 10), so the relationship can be described by the equation $y = 10x$. This equation means that the total number of price is always 10 times the number of pound.

So the constant of proportionality is 10.