A tradesman fixes his selling price of goods at 30% above the cost price. He sells half of this stock at this price, one-quarter of his stock at a discount of 15% on the original selling price, and the rest at a discount of 30% on the original selling price. Find his gain per cent altogether.

Answer.

Let x be a cost price. So, tradesman gain:

$$x * 0.50 * 1.3 + x * 0.25 * 1.3 * (1 - 0.15) + x * 0.25 * 1.3 * (1 - 0.30)$$
$$= 1.15375x.$$

His gain per cent equals: $\frac{1.15375x - x}{x} * 100\% = 15.375\%.$