PROFIT AND LOSS

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CONCEPT

- **Cost Price: It is the price at which any article or unit or item is bought. It is known as CP.**
- **Selling Price: It is the price at which any article or unit or item is sold. It is known as SP.**
- **Profit: If Selling Price is greater than Cost Price then seller makes profit.**
- **Profit = SP – CP**
- **Loss: If Cost Price is greater than Selling Price then seller incurs loss.**
- **Loss = CP – SP**

CONCEPT

- **Profit = SP – CP**
- **P% = (SP-CP/CP) X 100**
- **CP X P% = SP X 100 – CP X 100**
- **SP = [CP(100 + P%)]/100**

- **LOSS = CP – SP**
- **L% = (CP – SP/CP) X 100**
- **CP X L% = (CP – SP) x 100**
- **SP = [CP (100 – L%)]/100**

CONCEPT

- **SP = CP X 1.2 (20 %↑)**
- **SP = CP X .8 (20 %↓)**

QUESTION

Eggs are bought @ 7 for 1 Rs. If the shopkeeper want to make a profit of 40%. How many eggs sell for 1 Rs. ?

EXPLANATION

7 Eggs = 1 ₹

1 Egg = 1/7 ₹

Shopkeeper want to make a profit 40 %.

1 Egg = 1/7 × 1.4 = 1/5 ₹

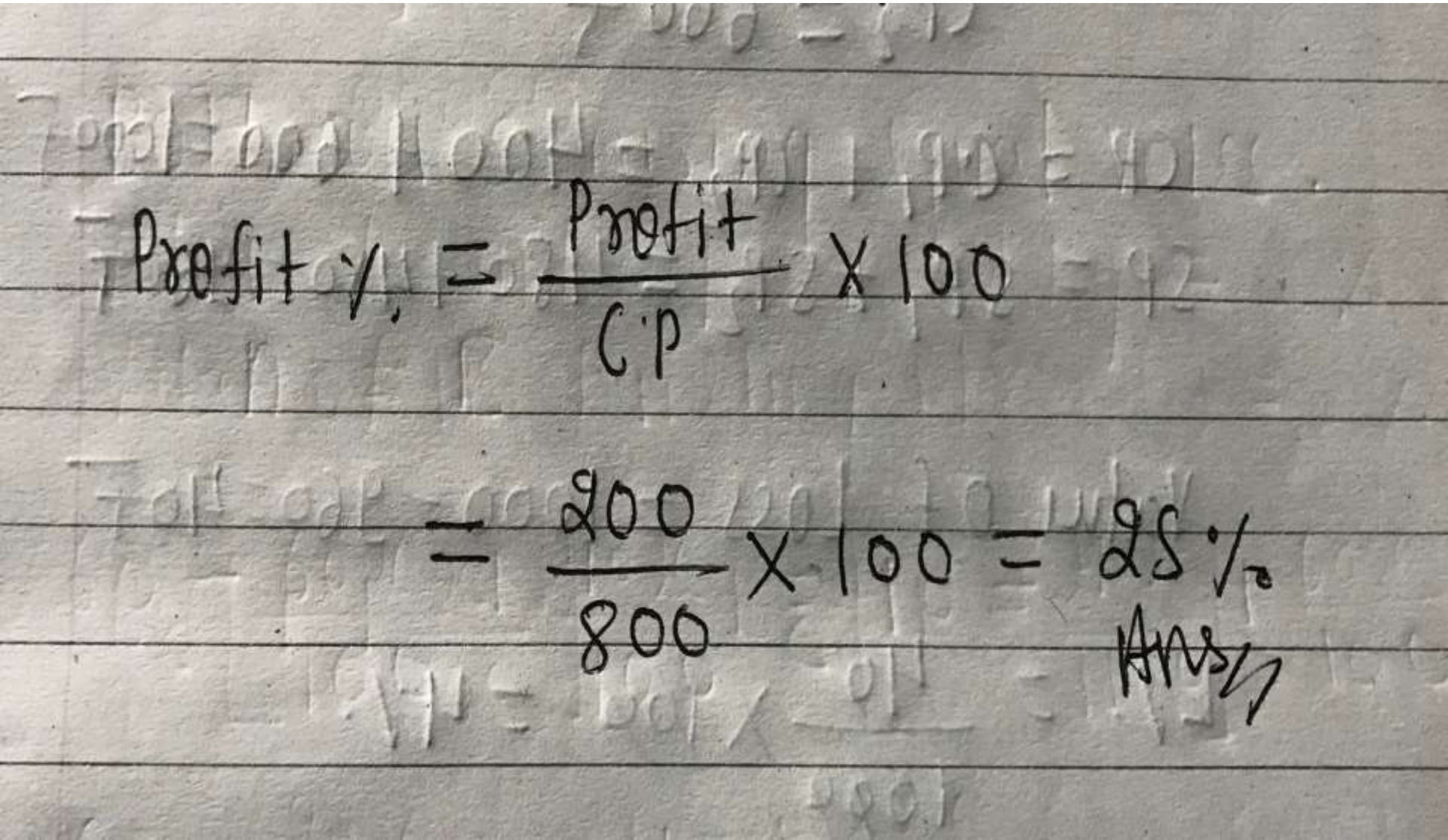
then sell 1 Egg in 1/5 ₹

5 Egg = 1 ₹ Ans //

QUESTION

A dishonest shopkeeper use a false rate of 800 grams instant of Kg weight. If he promises to sell the goods at the cost price then his profit percentage?

EXPLANATION



QUESTION

On selling 36 mangoes, a vender recover a cost price of 33 mangoes find loss percentage?

EXPLANATION

$$\text{Loss \%} = \frac{\text{Loss}}{\text{C.P}} \times 100$$

$$= \frac{36-33}{36} \times 100$$

$$= \frac{3}{36} \times 100 = 8.\overline{3}\ \%$$

RULE-1

If two articles are sold at a common selling price of Rs. S (each). One is sold at a profit of P% another at a loss of P% then effectively there is always a loss during entire transaction.

Loss value = $(2 P^2 S)/(100^2 - P^2)$

Loss % = $P^2/100$

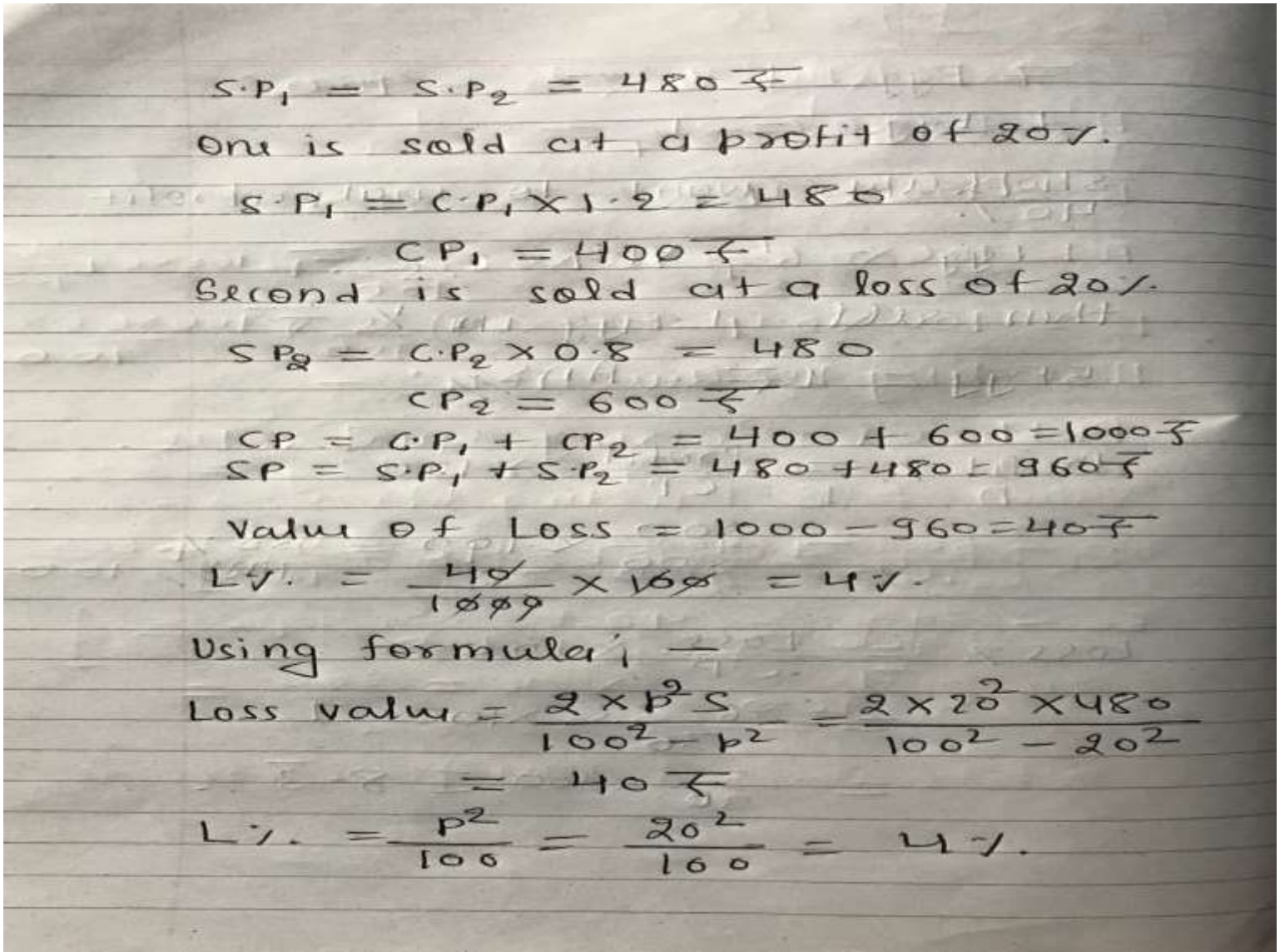
RULE-2

If two articles are bought at a common cost price. One is sold at a profit of P% another at a loss of P% then effectively there is *no profit no loss.*

QUESTION

T-Shirt are sold at a common selling price of 480 Rs. (each). One is sold at a profit of 20% and another at a loss of 20%. Find the value of profit or loss?

EXPLANATION



GATE-2013

A reduction of 5% in price of sugar enables a housewife to buy 3 kg more for Rs. 280. Find the reduce price.

(a) 4.92/kg

(b) 5.5/kg

(c) 3.33/kg

(d) 4.67/kg

EXPLANATION

Let initial sugar price x ₹/kg.

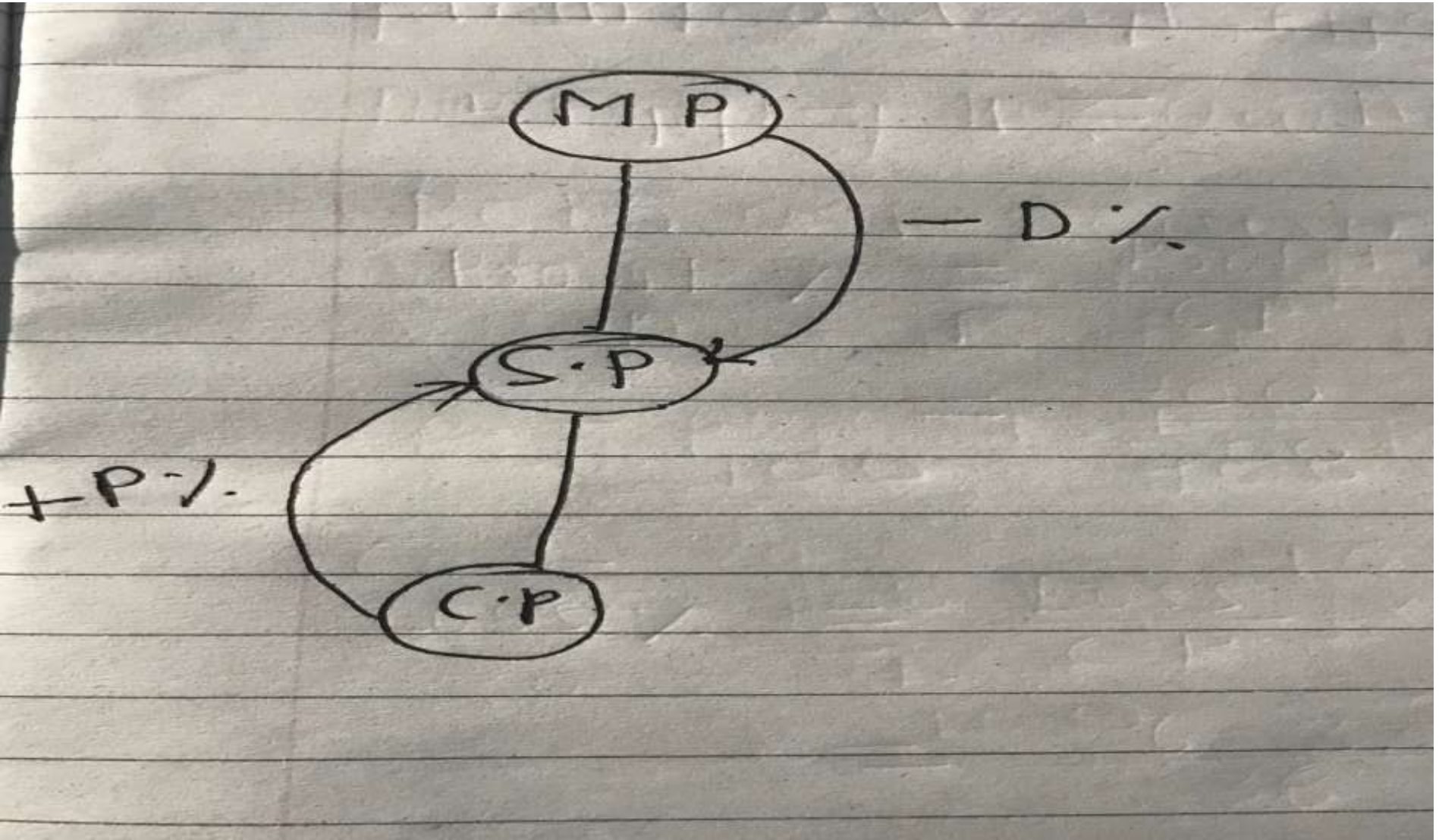
$$\frac{280}{0.95x} - \frac{280}{x} = 3$$

$$x = 4.92 \text{ ₹/kg}.$$

Reduced price $= 0.95x$

$= 4.67$

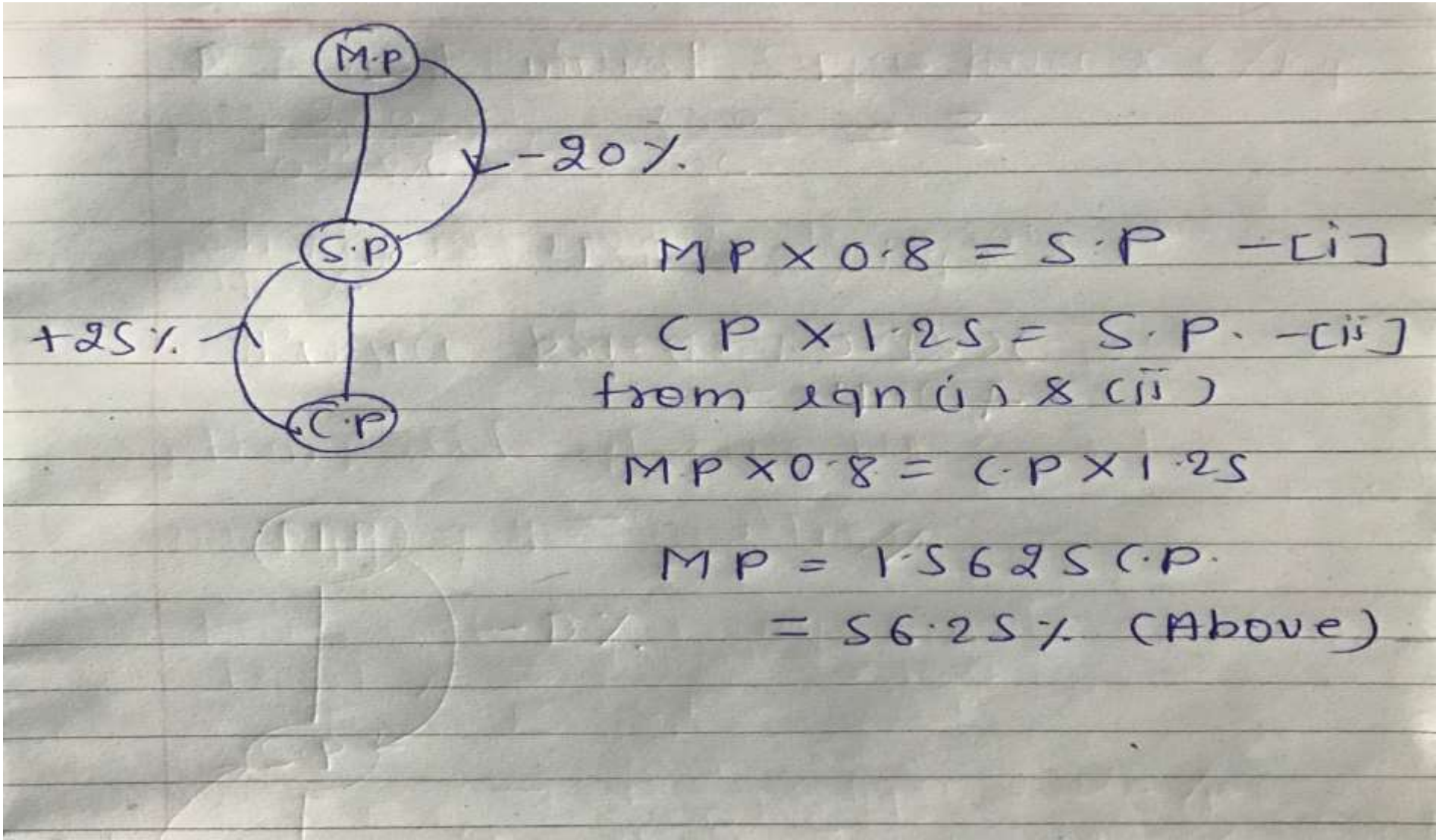
MARKET PRICE



QUESTION

After allow a discount of 20% a shopkeeper still manage to make a profit of 25%. By what percentage is the market price above the cost price?

EXPLANATION



$MP \times 0.8 = S.P$ —[i]

$CP \times 1.25 = S.P.$ —[ii]

from eqn (i) & (ii)

$MP \times 0.8 = CP \times 1.25$

$MP = 1.5625\ CP.$

$= 56.25\%$ (Above)


Thank you
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