GATE-2023 CRASH COURSE

GENERAL APTITUDE

Every 100

PERCENTAGES

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Percentages

$\frac{495}{500}$

$\frac{793}{800}$

$\frac{795}{800}$

- What is percentage?

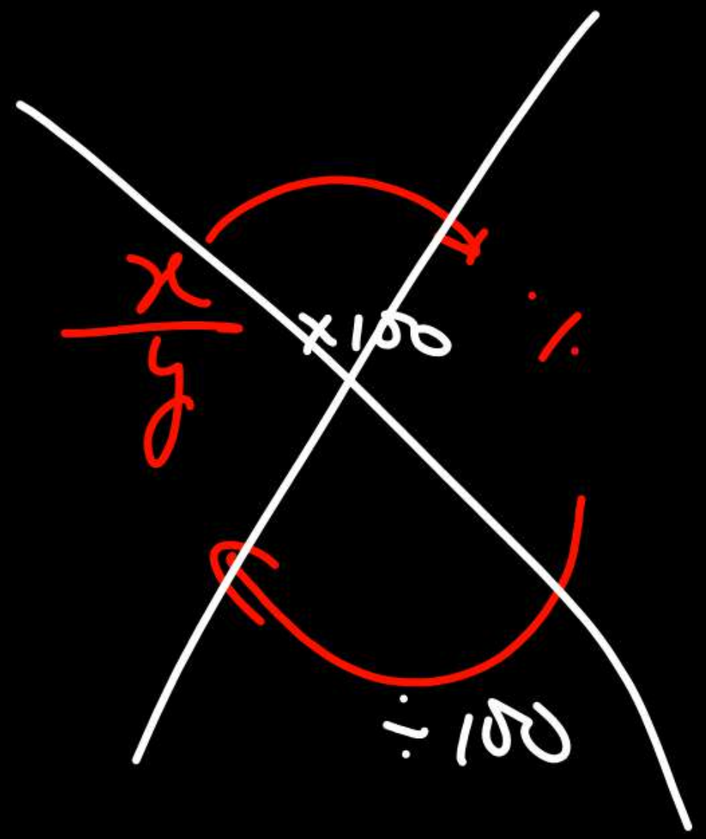
Per Cent

Every 100

What is Percentage?

The word percent can be understood as follows:
Per cent ⇒ for every 100.

What is the use of Percentage?



50% = 1/2 = 0.5

33 1/3 % = 1/3 = 0.3̄

3/6

2/6

What is 12.5% of 1600?

$\frac{1}{8}$

200

What is 50% of 1600?

$\frac{1}{2}$

50% of 1600

$\frac{50}{100} \times 1600$

$= 800$

What is 50% of 1600?

What is 50% of 1600 ?

NOTE:

It's easy to understand percentages in the form of fractions or Decimals.

$120\% = \frac{6}{5} = 1.2$

$5\% = \frac{1}{20} = 0.05$

$10\% = \frac{1}{10} = 0.1$

$15\% = \frac{3}{20} = 0.15$

$20\% = \frac{1}{5} = 0.2$

$25\% = \frac{1}{4} = 0.25$

$30\% = \frac{3}{10} = 0.3$

65%

70%

$66\frac{2}{3}\% = \frac{2}{3} = 0.\overline{6}$

30%

$33\frac{1}{3}\% = \frac{1}{3} = 0.\overline{3}$

35%

$100\% = 1 = 1$

Percentages Table

$5\% = 1/20 = 0.05$ $10\% = 1/10 = 0.1$ $15\% = 3/20 = 0.15$

$20\% = 1/5 = 0.2$ $25\% = ¼ = 0.25$ $30\% = 3/10 = 0.3$

$33\ 1/3\ \% = 1/3 = 0.333\ldots\ldots$

$66\ 2/3\ \% = 2/3 = 0.6666\ldots\ldots$

$100\% = 1 = 1$

Consecutive .....

10% ↑ + 10% ↑ + 10% ↑

500

100 → 25

50% ↓ + 50% ↓ = 75% ↓ = 33.1% ↑

KOUTONS

50% ↓ + 20% ↓ = 60% ↓

IBM

50% ↑ + 50% ↓

25% ↓ =

$0.5 \times 0.5 = 0.25$

75%

50% ↓ + 50% ↓ = 75% ↓

50% ↓ + 20% ↓ = 60% ↓

$0.5 \times 0.8 = 0.4$

50% ↑ + 50% ↓ = 25% ↓

$1.5 \times 0.5 = 0.75$

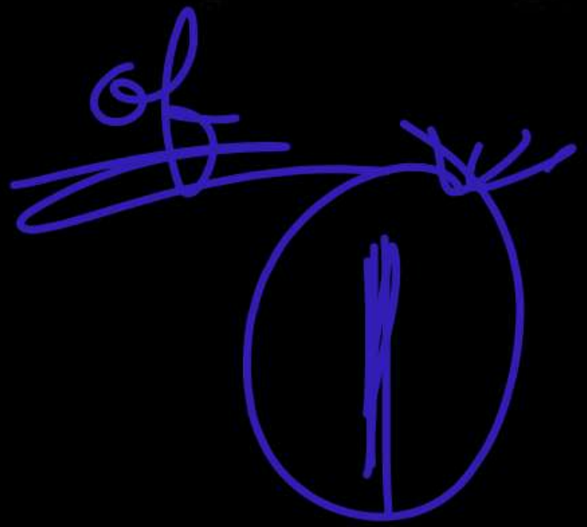
10% ↑ + 10% ↑ + 10% ↑ = 33.1% ↑

$1.1 \times 1.1 \times 1.1 = 1.331$

33.1%

Q.

In a renovation of a theatre, the ticket rate was increased by 40% and thus the customer decreased by 20%. What would be the percentage effect on revenue?



1.4×0.8

$= 1.12$

12% ↑

Q. If A is 25% more than B, then B is how much percentage less than A?

$0.8A = B$

$A = 125\%\ B$

20% ↓

4

$\frac{100}{125}\ A = B$

5

Q.

If the petrol rate is increased by 60%, then by how much percentage we should decrease our consumption, in order to maintain same budget?

$\frac{160}{100}$

$\frac{\frac{5}{160}}{\frac{160}{8}} = 0.625$

37.5% ↓

0.375

Q.

If the length of a rectangle increase by 20%, then by how much percent we should decrease the breadth in order to maintain same area?

$B = R \times C$

$\frac{x}{y}$

0.83

$0.1\overline{6}$

$16.\overline{6}\%\downarrow$

$\frac{y}{x}$?

$A = l \times b$

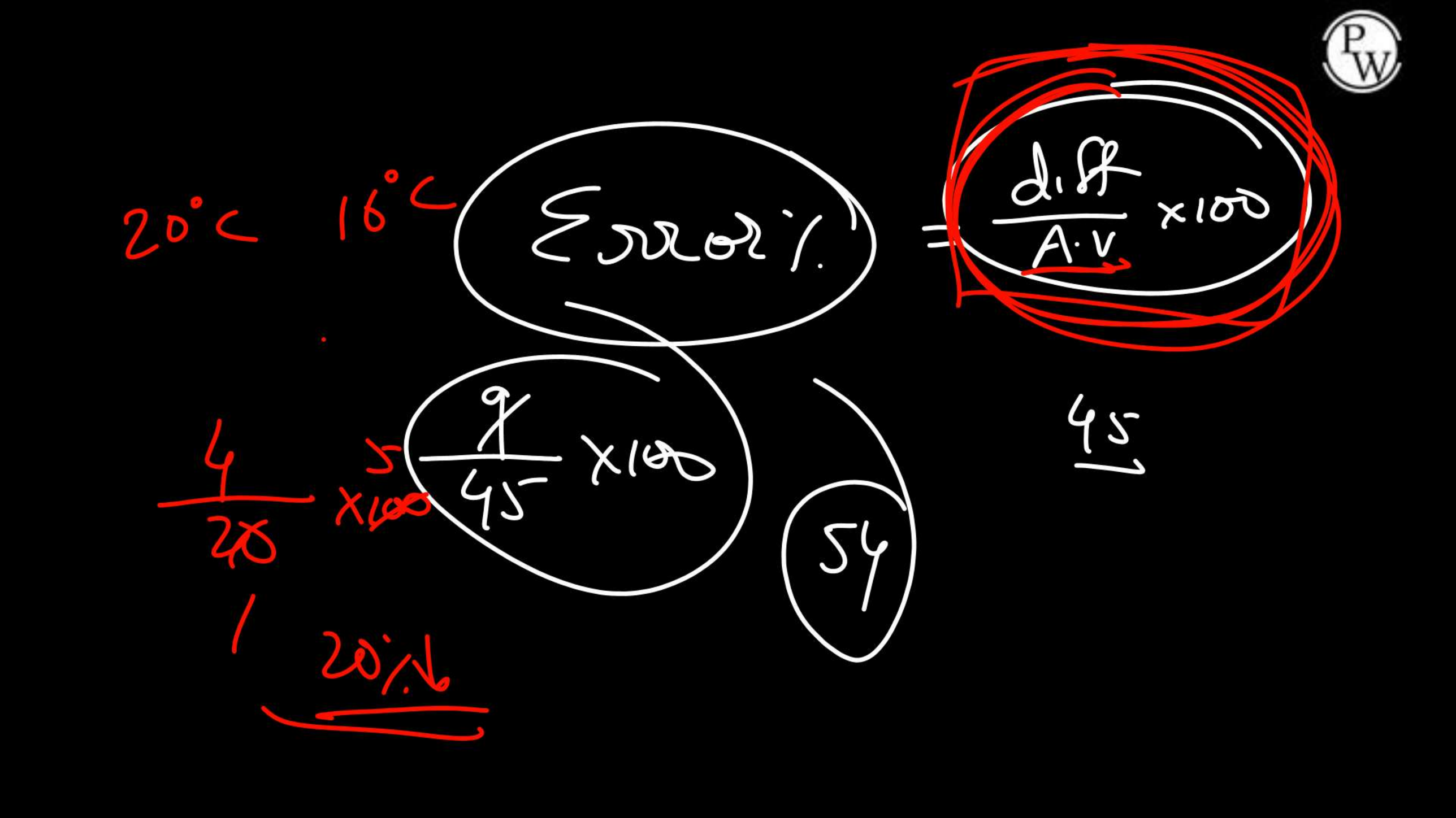
$\frac{120}{100}$

$\frac{x}{y}$

$\frac{5}{6} \times \frac{100}{120}$

$\frac{y}{x}$

$\frac{y}{24}$


20°C
16°C
Error %
= diff / A.V x100
45
9/45 x100
5
4/20 x100
54
1
20%

$$\frac{Difference}{Actual\ Value} \times 100$$

- % INCREASE
- % DECREASE

Brainstorming

Srinivas saves 20% of his income. If his income is increased by 20% and expenditure decreased by 10%, then find the percentage change in his savings.

Income	Saving	Expenditure
100	20	80
120	48	72

$$\text{Percentage increase} = \frac{\text{diffrence}}{\text{actual value}} \times 100$$

$$= \frac{28}{20} \times 100 = 140\%$$


thank you