

CDS 2 2024

LIVE

MATHS

REVISION

CLASS 1



NAVJYOTI SIR



05 August 2024 Live Classes Schedule

8:00AM --- 05 AUGUST 2024 DAILY CURRENT AFFAIRS --- RUBY MA'AM

9:00AM --- 05 AUGUST 2024 DAILY DEFENCE UPDATES --- DIVYANSHU SIR

SSB INTERVIEW LIVE CLASSES

9:00AM --- INTRODUCTION OF OIR & PRACTICE --- ANURADHA MA'AM

AFCAT 2 2024 LIVE CLASSES

1:00PM --- MAHA MARATHON SESSION

NDA 2 2024 LIVE CLASSES

11:00AM --- GK - HISTORY REVISION - CLASS 1 --- RUBY MA'AM

12:00PM --- PHYSICS REVISION - CLASS 1 --- NAVJYOTI SIR

1:00PM --- MATHS REVISION - CLASS 1 --- NAVJYOTI SIR

2:00PM --- BIOLOGY REVISION - CLASS 1 --- SHIVANGI MA'AM

5:30PM --- ENGLISH - ADAPTATION OF BORROWED WORDS - CLASS 2 --- ANURADHA MA'AM

CDS 2 2024 LIVE CLASSES

11:00AM --- GK - HISTORY REVISION - CLASS 1 --- RUBY MA'AM

12:00PM --- PHYSICS REVISION - CLASS 1 --- NAVJYOTI SIR

2:00PM --- BIOLOGY REVISION - CLASS 1 --- SHIVANGI MA'AM

3:00PM --- MATHS REVISION - CLASS 1 --- NAVJYOTI SIR

5:30PM --- ENGLISH - ADAPTATION OF BORROWED WORDS - CLASS 2 --- ANURADHA MA'AM



**REVISION
TOPIC :**

- **Percentage**

Q) ABCD is a square. If the sides AB and CD are increased by 30%, sides BC and AD are increased by 20%, then the area of the resulting rectangle exceeds the area of the square by

(a) 50%

(b) 52%

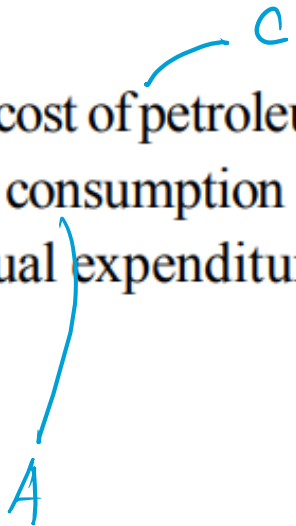
(c) 54%

(d) 56%

Ans: (d)

Q) When the cost of petroleum increases by 40%, a man reduces his annual consumption by 20%. Find the percentage change in his annual expenditure on petroleum.

- (a) 20% (b) 16%
 (c) 12% (d) 40%



$$\text{Annual expenditure (E)} = \text{cost} \times \text{annual consumption (A)} = CA$$

$$\begin{aligned} \% \text{ change} &= \left(\frac{14 \times 8}{100} - 1 \right) \times 100 \\ &= 12\% \end{aligned}$$

$$\left. \begin{array}{l} \underbrace{C \left(\frac{140}{100} \right)}_{\text{new cost}} \\ \underbrace{A \left(\frac{80}{100} \right)}_{\text{new (A)}} \end{array} \right\} E = C \left(\frac{140}{100} \right) A \left(\frac{80}{100} \right) = CA \left(\frac{14 \times 8}{100} \right)$$

Q) When the cost of petroleum increases by 40%, a man reduces his annual consumption by 20%. Find the percentage change in his annual expenditure on petroleum.

- | | |
|---------|---------|
| (a) 20% | (b) 16% |
| (c) 12% | (d) 40% |

Ans: (c)

Q) When the price of sugar was increased by 32%, a family reduced its consumption in such a way that the expenditure on sugar was only 10% more than before. If 30 kg were consumed per month before, find the new monthly consumption.

(a) 20 kg

(b) 25 kg

(c) 30 kg

(d) None of these

(A)

Let x

$$E = CA$$

$$30 \left(\frac{110}{100} \right) = x \left(\frac{132}{100} \right)$$

$$x = \frac{30 \times 11 \times 100}{10 \times 132}$$

Q) The digit at unit place of a two-digit number is increased by 100% and the digit at ten places of the same number is increased by 50%. The new number thus formed is 19 more than the original number. What is the original number?

(a) 22

(b) 63

(c) 24

(d) None of these

$10y + x$

$$\text{new number} = 10\left(\frac{3}{2}y\right) + 2x$$

$$15y + 2x - (10y + x) = 19$$

$$\underline{5y + x = 19} \quad / \quad \underline{\text{check options}}$$

Q) In an examination in which full mark were 500, A got 10% less than B. B got 25% more than C. C got 20% less than D. If A got 360 marks what % of full mark was obtained by D.

- (a) 90% (b) 80%
 (c) 50% (d) 60%

$$C \rightarrow \frac{80}{100} x = \frac{4}{5} x$$

$$B \rightarrow \frac{4}{5} x \times \frac{125}{100} = \frac{20x}{20} = x$$

$$A \rightarrow x \left(\frac{90}{100} \right) = \frac{9}{10} x = 360$$

$$x = 400$$

$$\frac{x \text{ marks}}{400}$$

$$\frac{400}{500} \times 100$$

$$\frac{4}{5} \times 100 = 80\%$$

- Q) In an examination in which full mark were 500, A got 10% less than B. B got 25% more than C. C got 20% less than D. If a got 360 marks what % of full mark was obtained by D.
- (a) 90% (b) 80%
(c) 50% (d) 60%

Ans: (b)

Q) In a competitive examination in State A, 6% candidates got selected from the total appeared candidates. State B had an equal number of candidates appeared and 7% candidates got selected with 80 more candidates got selected than A. What was the number of candidates appeared from each State?

(a) 7600

(b) 8000

(c) 8400

(d) Data inadequate

 x

$$7\% \text{ of } x - 6\% \text{ of } x = 80$$

$$1\% \text{ of } x = 80$$

$$x = 80 \times 100 = 8000$$

Q) The salary of a person is increased by 10% of his original salary. But he received the same amount even after increment. What is the percentage of his salary he did not receive?

- (a) 11% (b) 10%
(c) 100/11% (d) 90/11%

Ans: (c)

Q) If 50% of $(x - y) = 40\%$ of $(x + y)$, then what per cent of x is y ?

(a) $10\frac{1}{9}\%$

(b) $11\frac{1}{9}\%$

(c) $13\frac{1}{9}\%$

(d) $21\frac{1}{9}\%$

$$y = \left(\quad \right) x$$

↑

$$\left(\quad \right) \times 100 \rightarrow \text{percentage (Answer)}$$

Q) If 50% of $(x - y) = 40\%$ of $(x + y)$, then what per cent of x is y ?

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(b) $11\frac{1}{9}\%$

(c) $13\frac{1}{9}\%$

(d) $21\frac{1}{9}\%$

Ans: (b)

Q) If the height of a cone is increased by 50%, then what is the percentage increase in the volume of the cone?

(a) $\frac{100}{3}\%$

(b) 40 %

(c) 50 %

(d) $\frac{200}{3}\%$

$$V = \frac{1}{3} \pi r^2 h$$

$$V' = \frac{1}{3} \pi r^2 \left(\frac{3}{2} h \right) = \frac{1}{2} \pi r^2 h$$

$$\frac{\frac{1}{2} - \frac{1}{3}}{\frac{1}{3}} \times 100$$

$$=$$

Q) If the height of a cone is increased by 50%, then what is the percentage increase in the volume of the cone?

(a) $\frac{100}{3}\%$

(b) 40 %

(c) 50 %

(d) $\frac{200}{3}\%$

Ans: (c)

Q) Water contains $14\frac{2}{7}\%$ of hydrogen and the rest is

oxygen. In 350 g of water, oxygen will be

- (a) 300g (b) 250g
(c) 200g (d) None of these

$$\text{Remaining \%} = \% \text{ of oxygen} = 1 - \frac{1}{7} = \frac{6}{7}$$

$$\frac{6}{7} \times 350 = \underline{300g}$$

Q) To an examination, a candidate needs 40% marks. All questions carry equal marks. A candidate just passed by getting 10 answers correct by attempting 15 of the total questions. How many questions are there in the examination?

- ✓ (a) 25
(c) 40

$\left\{ \begin{array}{l} x \end{array} \right\}$

- (b) 30
(d) 45

y - marks allotted to each question.

$$40 = \frac{10y}{x \times y} \times 100$$

$$x = \frac{25 \times 100}{40} = 25$$

Q) To an examination, a candidate needs 40% marks. All questions carry equal marks. A candidate just passed by getting 10 answers correct by attempting 15 of the total questions. How many questions are there in the examination?

(a) 25

(b) 30

(c) 40

(d) 45

Ans: (a)

Q) By reduction of 20% in the price of oranges, one can purchase 5 oranges more for ₹ 2.50. Find the reduced price of the oranges per dozen and also the original price.

(a) 120 paise, 140 paise

(b) ₹ 0.8, ₹ 1.5

(c) ₹ 1.0, ₹ 1.5

(d) ₹ 1.2., ₹ 1.5

let ₹ x per piece.

originally, no. of oranges = ₹ $\frac{2.50}{x}$

$$\left[\frac{\frac{2.50}{x \times \frac{80}{100}}}{1} \right] - \frac{2.50}{x} = 5$$

Reduced price per dozen = $\frac{x \left(\frac{80}{100} \right)}{12}$

Q) By reduction of 20% in the price of oranges, one can purchase 5 oranges more for ₹ 2.50. Find the reduced price of the oranges per dozen and also the original price.

- (a) 120 paise, 140 paise (b) ₹ 0.8, ₹ 1.5
(c) ₹ 1.0, ₹ 1.5 (d) ₹ 1.2., ₹ 1.5

Ans: (d)

Q) An employee is required to contribute 10% of his payment to General Provident Fund. If he gets ₹13500 as net pay in a month, then what is the monthly General Provident Fund contribution (assuming no other deductions)?

(a) ₹ 1215

(b) ₹ 1350

(c) ₹ 1500

(d) ₹ 1650

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- | | |
|------------|------------|
| (a) ₹ 1215 | (b) ₹ 1350 |
| (c) ₹ 1500 | (d) ₹ 1650 |

Ans: (c)

- Q) $A = 10\%$ of x , $B = 10\%$ of y , $C = 10\%$ of $x + 10\%$ of y . On the basis of the above equalities, what is true in the following?
- (a) A is equal to B
 - (b) A is greater than B
 - (c) B is greater than A
 - (d) Relation cannot be established between A and B

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- (a) A is equal to B
 - (b) A is greater than B
 - (c) B is greater than A
 - (d) Relation cannot be established between A and B

Ans: (d)

Q) The ratio of salary of a worker in July to that in June was

$2\frac{1}{2} : 2\frac{1}{4}$, by what % the salary of July more than salary of

June. Also find by what %, salary of June was less than that of July.

- (a) $11\frac{1}{9}\%$ and 10% (b) 10% and $11\frac{1}{9}\%$
- (c) Both 10% (d) Both $11\frac{1}{9}\%$

Q) The ratio of salary of a worker in July to that in June was

$2\frac{1}{2} : 2\frac{1}{4}$, by what % the salary of July more than salary of

June. Also find by what %, salary of June was less than that of July.

- (a) $11\frac{1}{9}\%$ and 10% (b) 10% and $11\frac{1}{9}\%$
- (c) Both 10% (d) Both $11\frac{1}{9}\%$

Ans: (a)

Q) In measuring the side of a square, an error of 5% in excess is made. The error % in the calculated area is

(a) $10\frac{1}{4}\%$

(b) $10\frac{3}{4}\%$

(c) $1\frac{3}{4}\%$

(d) 25%

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(a) $10\frac{1}{4}\%$

(b) $10\frac{3}{4}\%$

(c) $1\frac{3}{4}\%$

(d) 25%

Ans: (a)

- Q) An empty fuel tank of a car was filled with A type petrol. When the tank was half-empty, it was filled with B type petrol. Again when the tank was half-empty, it was filled with A type petrol. When the tank was half-empty again, it was filled with B type petrol. What is the percentage of A type petrol at present in the tank?
- (a) 33.5% (b) 37.5% (c) 40% (d) 50%

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- (a) 33.5% (b) 37.5% (c) 40% (d) 50%

Ans: (b)

- Q) On a certain date, Pakistan has a success rate of 60% against India in all the ODIs played between the two countries. They lost the next 30 ODIs in a row to India and their success rate comes down to 30%. The total number of ODIs played between the two countries is
- (a) 50 (b) 45 (c) 60 (d) 30

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- (a) 50 (b) 45 (c) 60 (d) 30

Ans: (c)

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CLASS 2



NAVJYOTI SIR

**REVISION
TOPICS :
(06/08/24)**

- **Profit and Loss**