25 Sep 2024 Live Classes Schedule

Time	Topic	Instructor
8:00AM	25 SEP 2024 DAILY CURRENT AFFAIRS	RUBY MA'AM
9:00AM	25 SEP 2024 DAILY DEFENCE UPDATES	DIVYANSHU SIR

NDA 1 2025 LIVE CLASSES

Time	Topic	Instructor
11:30AM	GK - PHYSICAL GEOGRAPHY - CLASS 2	RUBY MA'AM
1:00PM	BIOLOGY - HUMAN BODY - CLASS 2	SHIVANGI MA'AM
4:00PM	MATHS - QUADRATIC EQUATIONS - CLASS 2	NAVJYOTI SIR
5:30PM	ENGLISH - PARTS OF SPEECH - CLASS 1	ANURADHA MA'AM

CDS 1 2025 LIVE CLASSES

| Time	Topic	Instructor
11:30AM	GK - PHYSICAL GEOGRAPHY - CLASS 2	RUBY MA'AM
1:00PM	BIOLOGY - HUMAN BODY - CLASS 2	SHIVANGI MA'AM
2:30PM	MATHS - PERCENTAGE - CLASS 2	NAVJYOTI SIR
5:30PM	ENGLISH - PARTS OF SPEECH - CLASS 1	ANURADHA MA'AM

AFCAT 1 2025 LIVE CLASSES

Time	Topic	Instructor
10:00AM	REASONING - VERBAL CLASSIFICATION	RUBY MA'AM
2:30PM	MATHS - PERCENTAGE - CLASS 1	NAVJYOTI SIR
4:00PM	STATIC GK - DEFENCE EXERCISE	DIVYANSHU SIR
5:30PM	ENGLISH - PARTS OF SPEECH - CLASS 1	ANURADHA MA'AM

PRACTISE TIME !

$$(6 - b^2)\frac{xy}{ab} - xy = ?$$
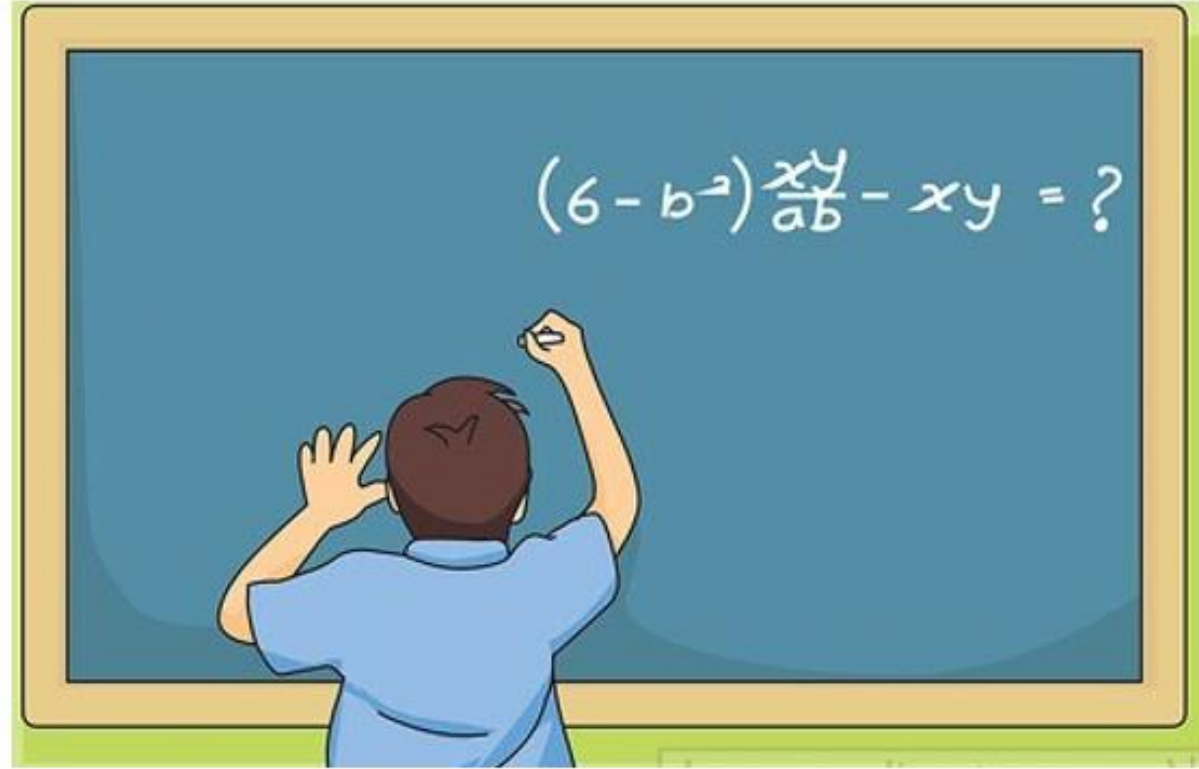
EXAMPLE

The price of a car is decreased by 10 % and 20 % in two successive years. What per cent of price of a car is decreased after two years ?

$$\left[-10 - 20 + \frac{(-10)(-20)}{100} \right] \%$$

$$-30 + 2 = -28\%$$

EXAMPLE

If the length and width of a rectangular garden were each increased by 20%, then what would be the per cent increase in the area of the garden ?

$$A = \boxed{lb}$$

$$A' = \left[l \left(1 + \frac{20}{100} \right) \right] \left[b \left(1 + \frac{20}{100} \right) \right]$$

$$= lb \left(\frac{6}{5} \right) \left(\frac{6}{5} \right) = \boxed{lb \left(\frac{36}{25} \right)}$$

$$\left(\frac{36}{25} - 1 \right) \times 100$$

$$= \frac{11}{25} \times 100$$

$$= 44\%$$

QUESTION

Raghav spends 80% of his income. If his income increase by 12% and the savings decrease by 10%, then what will be the percentage change in his expenditure?

$$I \longrightarrow ₹ 100 \xrightarrow{+12\%} 112$$

$$E \longrightarrow \boxed{₹ 80}$$

$$112 - 18 = \boxed{94}$$

$$S \longrightarrow ₹ 20 \xrightarrow{-10\%} \boxed{18}$$

$$(100 - 80)$$

Income – Expenditure $\dfrac{94 - 80}{80} \times 100 = \dfrac{14}{80} \times 100 = \dfrac{70}{4} = 17.5\%$

QUESTION

5% saving

The sum of the salaries of A and B is $Rs43000$. A spends 95% of his salary and B spends 80% of his salary. If their savings are same, What is A's salary?

A
x

B
$43000 - x$

20% Saving

$x = 172000 - 4x$

$5x = 172000$

$5\% \text{ of } x = 20\% \text{ of } (43000 - x)$

$\dfrac{1\cancel{5}}{\cancel{100}} \times x = \dfrac{\overset{4}{\cancel{20}}}{\cancel{100}} \times (43000 - x)$

$\boxed{x = 34400}$

QUESTION

In exam, A obtained 10% more marks than B, B obtained 20% more marks than C.

If A obtained 272 more marks than C, find the marks obtained by C.

$C \longrightarrow \boxed{100 \; marks}$

$B \longrightarrow 100 + 20 = \underline{\underline{120}} \; marks$

$A \longrightarrow 120 + 12 = \underline{132}$

(assumed)   (real)

$32 = 272$

$\boxed{1} = \left(\dfrac{272}{32} \right)$

$$100 = \dfrac{\overset{17}{\cancel{272}}}{\underset{2}{\cancel{32}}} \times 100$$

$$= \underline{850 \; marks}$$

QUESTION

Vishal requires 40% to pass. If he gets 185 marks, falls short by 15 marks, what was the maximum he could have got ?

— Total

passing marks = $185 + 15 = 200$

$$\frac{\overset{5}{\cancel{200}}}{Total\ (T)} \times 100 = \cancel{40}$$

$$T = 500\ marks$$

QUESTION

Fresh fruits contain 68% water and dry fruits contains 20% water. How much dry fruits can be obtained from $100 kg$ of fresh fruits?

dry matter / pulp (fresh fruits) = $100\% - 68\% = 32\%$

In $100 kg$ = $32 kg$

$T = 40 kg$

80% of (total) = 32

$\dfrac{1\cancel{8}\ \cancel{80}}{\cancel{100}\ 20} \times T = \cancel{32}\ 2$

QUESTION

A salesman is allowed 16% commission on the total sales made by him and a bonus

of 3% on the sales over 18500. If the total earning of a salesman is $Rs15595$. Find

the total sales? ✓

$$16\% \text{ of } x + 3\% \text{ of } (x - 18500) = 15595$$

$$\frac{19}{100} \times x - (185 \times 3) = 15595$$

$$\frac{19}{100} x = 15595 + 555 = \underline{16150}$$

$$x = \frac{\overset{850}{16150} \times 100}{\cancel{19}}$$

$$= 85000$$

7

2

QUESTION

If the numerator of a fraction is increased by 200% and the denominator of the fraction is increased by 150%, the resultant fraction is $\dfrac{9}{35}$. What is the original fraction?

$$\frac{x(1+2)}{y\left(1+\frac{3}{2}\right)} = \frac{9}{35}$$

$$\frac{x}{y} = \frac{\overset{3}{9} \times \overset{}{5}}{\underset{7}{35} \times 2 \times \overset{}{3}} = \frac{3}{14}$$

$$\frac{3x}{\frac{5}{2}y} = \frac{9}{35}$$

QUESTION

The sum of two numbers is $\dfrac{28}{25}$ of the first number. The

second number is what percent of the first?

(a) 12% ✓

(b) 14%

(c) 16%

(d) 18%

$$y = \% \ of \ x$$

$$\frac{y}{x} = \left(\underline{}\right) \ \%$$

$$x + y = \frac{28}{25}x$$

$$y = \frac{3}{25}x$$

$$\frac{y}{x} = \frac{3}{25}$$

$$\frac{3}{25} \times 100 = 12\%$$

QUESTION

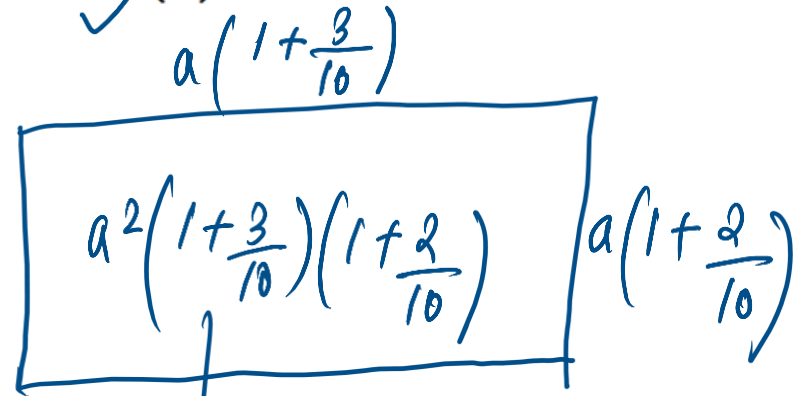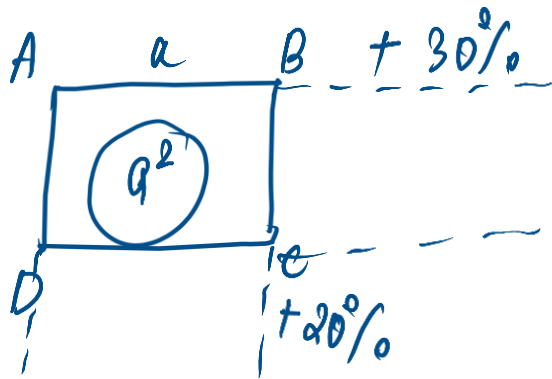The sum of two numbers is $\dfrac{28}{25}$ of the first number. The

second number is what percent of the first?

(a)   12%   (b)   14%

(c)   16%   (d)   18%

Ans: (a)

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

$$\left(\frac{156}{100} - 1\right) \times 100$$

(a) 50%   (b) 52%

(c) 54%   (d) 56%

$$56\%$$

$$a\left(1 + \frac{3}{10}\right)$$

A a B $+30\%$

a^2

$+20\%$

$$a^2\left(1 + \frac{3}{10}\right)\left(1 + \frac{2}{10}\right) \quad a\left(1 + \frac{2}{10}\right)$$

$$a^2\boxed{\frac{156}{100}}$$

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%

Expenditure = cost × consumption

(E) (c) (s)

$$E = \boxed{CS}$$

$$E' = C\left(1 + \frac{40}{100}\right) S\left(1 - \frac{20}{100}\right) = \boxed{CS}\left(\frac{7}{5}\right)\left(\frac{4}{5}\right) = \frac{28}{25}(CS)$$

$$\left(\frac{28}{25} - 1\right) \times 100$$

$$\frac{3}{25} \times 100 = \underline{12\%}$$

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

$$E = 30C \qquad (c - \text{cost initially}) \qquad \text{new consumption}$$

$$30\,c\left(1+\frac{10}{100}\right) = c\left(1+\frac{32}{100}\right)S'$$

$$30 \times \frac{11}{10} = \left(\frac{132}{100}\right)S'$$

$$S' = \frac{33 \times 100}{132} = 25\,kg$$

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

Ans: (b)

QUESTION

A reduction of 20% in the price of an apple enable a man to buy 10 apple more for ₹ 54. The reduced price of apple per dozen is

(a) ₹ 4.32 ✓

(b) ₹ 12.96 ✓

(c) ₹ 10.80 ✓

(d) ₹ 14.40

$$\left(\frac{54}{x}\right) + 10 = \frac{54}{\left(\frac{4}{5}x\right)}$$

$$\frac{54}{x}\left(\frac{5}{4} - 1\right) = 10$$

$$x = \frac{54 \times 1}{4 \times 10} = \frac{27}{20}$$

original price = ₹ x (for 1 apple)

Reduced " = ₹ $x\left(1 - \frac{1}{5}\right) = \left(₹ \frac{4}{5}x\right)$
(for 1 apple)

per dozen = $12 \times \frac{4x}{5} = ₹ \frac{48}{5} x = \frac{48}{5} \times \frac{27}{20} = \frac{324}{25} = 12$

SSBCrack
EXAMS

QUESTION

A reduction of 20% in the price of an apple enable a man to buy 10 apple more for ₹ 54. The reduced price of apple per dozen is

(a) ₹ 4.32
(b) ₹ 12.96
(c) ₹ 10.80
(d) ₹ 14.40

Ans: (b)

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

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.

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(b) ₹0.8, ₹1.5

(c) ₹1.0, ₹1.5

(d) ₹1.2., ₹1.5

Ans: (d)

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 α

(b) 63 a

(c) 24 α

(d) None of these

$$\frac{41}{a\ b} \quad \Big/ \ ab = 4x1$$
$$= \textcircled{4}\, \alpha$$
$$10a + b = 10 \times 4 + 1 = 41 \checkmark$$

$$\text{Number} \longrightarrow \boxed{10y + x}$$

$$\cancel{y} \qquad x$$

Ten's place   unit place

$$y\left(1 + \frac{1}{2}\right) \qquad x(1+1)$$

$$\frac{3}{2}y \qquad\qquad 2x$$

$$10\left(\frac{3}{2}y\right) + 2x$$

$$\boxed{15y + 2x}$$

$$\text{Difference} = 5y + x = \overline{19}$$

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

Ans: (d)

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%

$$\frac{\overset{80}{\cancel{400}}}{\cancel{500}_{5}} \times \cancel{100} = 80\%$$

$D \longrightarrow 100 \text{ marks} \quad\text{---}\quad 100 \times 4 = 400 \text{ marks}$

$C \longrightarrow \underline{80}$

$B \longrightarrow 80 + 20 = 100 \text{ marks}$

$A \longrightarrow 100 - 10 = \boxed{90} \quad\text{---}\quad \underline{360}$

$1 \quad\text{---}\quad \boxed{4}$

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)

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

$$\frac{1}{100} \times x = 80$$

$$x = 8000$$

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

Ans: (b)

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%

let salary = ₹ 100

new salary = ₹ 110) ₹ 10

$$\frac{10}{110} \times 100 = \frac{100}{11} \%$$

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

$$y = \% \text{ of } x$$

$$\frac{y}{x} = \_\_\_\_ ?\%$$

$$\left(\frac{a}{b} = \frac{c}{d} \right.$$

$$\left. \frac{a+b}{a-b} = \frac{c+d}{c-d} \right| \quad \frac{x}{y} = 9$$

$$\frac{1}{2}(x-y) = \frac{2}{5}(x+y)$$

$$\frac{x+y}{x-y} = \frac{\boxed{1/2}}{\boxed{2/5}} = \frac{x}{y}$$

$$\frac{x+y+x-y}{x+y-(x-y)} = \frac{\frac{1}{2} + \frac{2}{5}}{\frac{1}{2} - \frac{2}{5}} \quad \left| \frac{y}{x} = \frac{1}{9} \right)$$

$$\frac{2x}{2y} = \frac{9}{1}$$

$$\frac{100}{9}\% = 11\frac{1}{9}\%$$

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

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) $\dfrac{100}{3}\%$

(b) 40 %

(c) 50 %

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

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

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

(b) 40 %

(c) 50 %

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

Ans: (c)

Q) 38L of milk was poured into a tub and the tub was found to be 5% empty. To completely fill the tub, what amount of additional milk must be poured?

(a) 1 ℓ (b) 2 ℓ

(c) 3 ℓ (d) 4 ℓ

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(a) 1 ℓ (b) 2 ℓ

(c) 3 ℓ (d) 4 ℓ

Ans: (b)

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

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oxygen. In 350 g of water, oxygen will be

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

Ans: (a)

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

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) 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

$$10\% \text{ of } x = \underline{\qquad}$$

$$x - 10\% \text{ of } x = 13500$$

$$90\% \text{ of } x = 13500$$

$$x =$$

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

Ans: (c)

Q) A man losses 20% of his money. After spending 25% of the remaining, he has ₹480 left. What is the amount of money he originally had?

(a) ₹ 600

(b) ₹ 720

(c) ₹ 800

(d) ₹ 840

$$25\% \text{ of } \underline{80\%} \text{ of } x = ₹ 480$$

$$\frac{1}{4} \times \frac{4}{5} \times \underline{\underline{x}} = 480$$

Q) A man losses 20% of his money. After spending 25% of the remaining, he has ₹480 left. What is the amount of money he originally had?

(a)   ₹ 600

(b)   ₹ 720

(c)   ₹ 800

(d)   ₹ 840

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

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

Ans: (d)

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

$2\dfrac{1}{2} : 2\dfrac{1}{4}$, 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) $11\dfrac{1}{9}\%$ and 10%

(b) 10% and $11\dfrac{1}{9}\%$

(c) Both 10%

(d) Both $11\dfrac{1}{9}\%$

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

$2\dfrac{1}{2} : 2\dfrac{1}{4}$, 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) $11\dfrac{1}{9}\%$ and 10%

(b)   10% and $11\dfrac{1}{9}\%$

(c)   Both 10%

(d)   Both $11\dfrac{1}{9}\%$

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) $10\dfrac{1}{4}\%$

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

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

(d) 25%

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%

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

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

Ans: (c)