

Quiz Date: 9th September 2020

Q1. If length, breadth and height of cuboid increased by 10%, 20% and 30% respectively. Find out percentage increment in volume of cuboid?

- (a) 60.2%
- (b) 66.1%
- (c) 70.7%
- (d) 71.6%
- (e) 77%

Q2. The ratio of the radius and height of cone is 3:4 and its volume is 12936 cu.cm. Find out its slant height.

- (a) 30 cm
- (b) 33 cm
- (c) 35 cm
- (d) 42 cm
- (e) 27 cm

Q3. If the Total surface Area of cube is 216 sq.cm. then find out its volume.

- (a) 216 cu.cm
- (b) 198 cu.cm
- (c) 343 cu.cm
- (d) 195 cu.cm
- (e) 170 cu.cm

Q4. One-third of a consignment was sold at a profit of 8% and remaining at a loss of 1%. If the total profit was Rs. 360, the value of the consignment (in Rs) was:-

- (a) 12000
- (b) 15000
- (c) 18000
- (d) 21000
- (e) 17500

Q5. A man purchases two books Q and E at a total cost of Rs. 9500. He sells Q with 20% profit and E at loss of 30% and gets the same selling price for both the books. Find out the purchasing prices of Q and E respectively (in Rs.)?

- (a) 3500, 2400
- (b) 3300, 2700
- (c) 3500, 6000
- (d) 3100, 5500
- (e) None of these

Q6. An article was sold for Rs. P after giving a discount of q%. then, its list price is:-

- (a) $\frac{100q}{100-p}$

- (b) $\frac{100q}{1-p}$
(c) $\frac{100p}{100-q}$
(d) $\frac{100p}{1-\left(\frac{q}{100}\right)}$
(e) None of these.

Q7. Successive discounts of 10%, 20% and 30% amount to a single discount of

- (a) 80%
(b) 70%
(c) 73%
(d) 49.6%
(e) 50%

Q8. The difference between the cost price and sale price of an article is Rs. 600. If the profit is $16\frac{2}{3}\%$ the selling price is (in (Rs.):-

- (a) 3600
(b) 3200
(c) 4200
(d) 4800
(e) None of these

Q9. find the area of Right-angle triangle whose perimeter is 60cm and ratio of its base and perpendicular is 3:4.

- (a) 110 sq.cm.
(b) 130 sq.cm.
(c) 150 sq.cm.
(d) 170 sq.cm.
(e) 166 sq.cm.

Q10. A rectangular park is 150m long and 70m wide. A path 5m wide is constructed outside the park. Find out the area of path.

- (a) 2100 sq.m.
(b) 2200 sq.m.
(c) 2250 sq.m.
(d) 2300 sq.m.
(e) 2400 sq.m.

Q11. Dharmender started a business with a capital of Rs. 2675 and another person Sanjay joined Dharmender after some months with a capital of Rs. 1800, if out of the total annual profit of Rs.3144, Dharmender's share was Rs. 2568 then How many months after Dharmender, Sanjay joined the business?

- (a) 12 months
(b) 9 months
(c) 10 months

- (d) 8 months
- (e) 4 months

Q12. A, B and C enter into a partnership, A invest $X+8000$, B invest $2X+2000$ and C invest $3X+4000$ for one year. If share of B is 4000 from total profit of 16000, then find the difference between investment of A and C.

- (a) 4000
- (b) 5000
- (c) 6000
- (d) 2000
- (e) 7000

Q13. Yogesh, Deepak and Sanjay started a business with Rs 16000, Rs 12000 and Rs 8000 respectively. After a year if all three divide the profit equally then time given by Yogesh in business is what percent of the time given by Deepak in business?

- (a) 25%
- (b) $33\frac{1}{3}\%$
- (c) 50%
- (d) 75%
- (e) $133\frac{1}{3}\%$

Q14. Ritu and Priya invested in the ratio 7 : 8 in a business. Ritu withdrew her entire amount at the end of 9 months. If they got an annual profit of Rs 34450, then find the difference between their share in profit?

- (a) Rs 6400
- (b) Rs 8180
- (c) Rs 7150
- (d) Rs 6400
- (e) Rs 7560

Q15. A, B and C started a business with Rs 60,000. Amount invested by 'A and C' together is twice than that of 'B' while amount invested by 'A' and 'B' together is thrice then that of 'C'. 'A' invested for 6 months, 'B' for 9 months and 'C' for a year. Find the share of 'B' out of total profit of Rs 3400.(in Rs.)

- (a) Rs. 1200
- (b) Rs. 1800
- (c) Rs. 1000
- (d) Rs. 1400
- (e) Rs. 1500

Solutions

S1. Ans(d)

Sol.

Let length = $100x$ unit

Breadth = $100y$ unit

And height = $100z$ unit

New length = $100x + 100x \times \frac{10}{100} = 110x$ unit

Similarly breadth = $120y$ unit

Height = $130z$ unit

Percentage changed volume = $\frac{110x \times 120y \times 130z - 100x \times 100y \times 100z}{100x \times 100y \times 100z} \times 100$
 $= 71.6\%$

S2. Ans(c)

Sol.

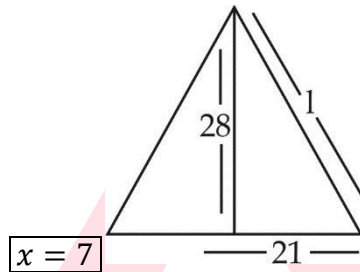
Let radius = $3x$ cm

And height = $4x$ cm

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

$12936 = \frac{1}{3} \times \frac{22}{7} \times 3x \times 3x \times 4x$

$x^3 = 343$



So, radius = $3x = 21$ cm

Height = $4x = 28$ cm.

$l^2 = 28^2 + 21^2 = 1225$

$l = 35$ cm

Slant height = 35 cm

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S3. Ans.(a)

Sol.

Total surface area of cube = $6a^2$ ($\because a$ = side of cube)

$216 = 6a^2$

$a = 6$ cm

volume of cube = $a^3 = 216 \text{ cm}^3 = 216 \text{ cu.cm.}$

S4. Ans.(c)

Sol. Let total consignment = $3x$

$\left(\frac{1}{3}\right)^{\text{rd}}$ at profit of 8%

$\frac{1}{3} \times 3x \times 8\% = 8x\%$

Remainder at a loss of 1%

$\frac{2}{3} \times 3x \times (-1\%) = -2x\%$

Total profit = $8x\% - 2x\% = 6x\%$

$$6x\% = 360 \text{ (given that)}$$

$$\frac{6}{100} \times x = 360$$

$$x = \text{Rs } 6000$$

$$\text{total consignment} = 3x = 3 \times 6000 = \text{Rs. } 18000.$$

S5. Ans.(c)

$$\text{Sol. } Q + E = 9500$$

$$\frac{120}{100} \times Q = \frac{70}{100} \times E$$

$$\frac{Q}{E} = \frac{7}{12}$$

$$\text{Let } Q = 7x$$

$$\text{and } E = 12x$$

$$Q + E = 9500$$

$$7x + 12x = 9500$$

$$x = \text{Rs } 500$$

$$Q = 7x = \text{Rs. } 3500$$

$$E = 12x = \text{Rs } 6000$$

S6. Ans.(c)

$$\text{Sol. Let list price} = x$$

$$x \left(\frac{100-q}{100} \right) = p$$

$$x = \frac{100p}{100-q}$$

S7. Ans.(d)

$$\text{Sol. by formula } a + b - \frac{a \times b}{100}$$

$$10\% \text{ and } 20\%$$

$$= 10 + 20 - \frac{10 \times 20}{100} = 28\%$$

$$28\% \text{ and } 30\%$$

$$= 28 + 30 - \frac{28 \times 30}{100}$$

$$= 49.6\%$$

$$\text{Or Let M.P} = 100$$

$$\text{SP} = 100 \times \frac{100-10}{100} \times \frac{100-20}{100} \times \frac{100-30}{100}$$

$$= 100 \times \frac{9}{10} \times \frac{8}{10} \times \frac{7}{10}$$

$$= 50.4$$

$$\text{Discount \%} = 100 - 50.4$$

$$= 49.6\%$$

S8. Ans.(c)

$$\text{Sol. Let C.P} = x$$

$$\left(100 + 16\frac{2}{3} \right) \% x - 100\% x = 600$$

$$16\frac{2}{3}\% x = 600$$

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$$\frac{50}{3 \times 100} x = 600$$

$$x = \text{Rs. } 3600$$

$$\text{S.P} = \left(100 + 16\frac{2}{3}\right) \% x = \frac{350}{3 \times 100} x = \frac{7}{6} \times 3600 = 4200 \text{ Rs.}$$

S9. Ans(c)

Sol.

Perimeter of right angle triangle = base + height + hypotenuse

Let base = $3x$ cm

Perpendicular (height) = $4x$ cm

$$\text{Hypotenuse}^2 = \text{base}^2 + \text{perpendicular}^2 = 25x^2$$

Hypotenuse = $5x$ cm

$$\text{Perimeter} = 3x + 4x + 5x$$

$$60 = 12x \text{ cm}$$

$$x = 5 \text{ unit}$$

$$\text{area of right angle triangle} = \frac{1}{2} \times \text{base} \times \text{perpendicular}$$

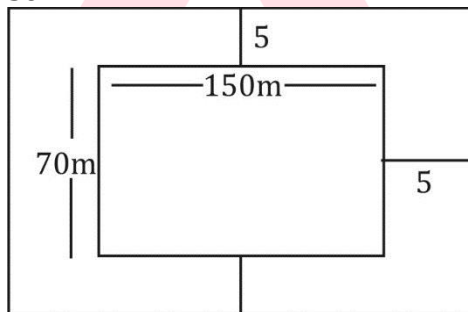
$$= \frac{1}{2} \times 3x \times 4x$$

$$= 6x^2$$

$$= 6 \times 5 \times 5 = 150 \text{ cm square}$$

S10. Ans.(d)

Sol.



Area of path = area of whole constructed area – area of park

$$= 160 \times 80 - 150 \times 70$$

$$= 12800 - 10500$$

$$= 2300 \text{ m}^2$$

S11. Ans.(d)

Sol.

Let Sanjay join for 'x' month.

∴ Ratio of capital

$$= 2675 \times 12 : 1800 \times x$$

$$= 2675 : 150x$$

$$= 107 : 6x$$

$$\therefore \text{Dharmender's profit} = \frac{107}{107+6x} \times 3144$$

$$\Rightarrow 2568 = \frac{107 \times 3144}{107+6x}$$

$$\Rightarrow \frac{1}{131} = \frac{1}{107+6x}$$

$$\Rightarrow 6x = 24 \Rightarrow x = 4$$

Required months = $12 - 4 = 8 \text{ months}$

S12. Ans.(d)

Sol.

ATQ,

$$\frac{2x + 2000}{2x + 2000 + x + 8000 + 3x + 4000} = \frac{4000}{16000}$$

$$X = 3000$$

Required difference $\rightarrow 3x + 4000 - x - 8000$
 $\rightarrow 2000$

S13. Ans.(d)

Sol.

Let, time given by Yogesh, Deepak and Sanjay is x, y and z months respectively

ATQ,

$$16000 \times x : 12000 \times y : 8000 \times z$$

$$\begin{array}{ccc} 1 & : & 1 & : & 1 \\ x & : & y & : & z \\ = 3 & : & 4 & : & 6 \end{array}$$

$$\text{Required \%} = \frac{3}{4} \times 100 = 75\%$$

S14. Ans.(c)

Sol.

Let Ritu's investment be 7x and Priya's investment be 8x

$$\text{Ratio of their profit} = \frac{7x \times 9}{8x \times 12} = \frac{21}{32}$$

$$\text{Difference between their shares in profit} = \frac{32-21}{32+21} \times 34450$$

$$= \frac{11}{53} \times 34450$$

$$= 7150$$

S15. Ans.(a)

Sol.

Let, amount invested by A, B and C is 'a', 'b' and 'c' respectively.

ATQ,

$$a + c = 2b \quad \dots(i)$$

$$a + b = 3c \quad \dots(ii)$$

on solving (i) & (ii) we get

$$4a = 5b \text{ \& } 3b = 4c$$

$$\Rightarrow a : b : c$$

$$5 : 4 : 3$$

Ratio of profit

$$\begin{array}{rcl} A & : & B & : & C \\ 5 \times 6 & : & 4 \times 9 & : & 3 \times 12 \\ 5 & : & 6 & : & 6 \end{array}$$

$$B's \text{ profit} = \frac{6}{17} \times 3400 = 1200$$

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