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Q-6

-(a)-

Arithmetic mean = 15

$$\text{Mean} = \frac{9+8+10+K+12}{5}$$

$$15 = \frac{39+K}{5}$$

$$75 = 39 + K$$

$$K = 75 - 39$$

$$K = 36$$

So,

Value of $K = 36$

-(b)-

Let intial quality of Sugar and water be = X

Sugar intial quality = $4x$

water intial quality = $3x$

Total intial quality = $4x + 3x \longrightarrow 7x$

If We 10 liter water

$= 3x + 10$

New ratio

4 : 5

$4x : 3x + 10 = 4 : 5$

Intial ratio after adding 10 liter = New ratio

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$$\frac{4x}{3x+40} = \frac{4}{5}$$

$$20x = 12x + 40$$

$$8x = 40$$

$$x = 5$$

So intial quality of Sugar $= 4x$

Putting value of x

$= 4(5)$

Intial quality of Sugar $= 20$

-(C)-

$$\text{Volum} = \frac{4}{3}\pi r^3 \longrightarrow (1)$$

Volum $= V$

$\pi = 3.14$

$\therefore$ radius $= 12$ cm

Putting the value in Eq (1)

$$V = \frac{4}{3} \times 3.14 \times (12)^3$$

$$= \frac{4}{3} \times 3.14 \times 1728$$

$$= 4 \times 3.14 \times 576$$

$$V = 7234.56$$

Volum of football $= 7234.56$ cubic centimeters

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-(d)-

-10, -8, +6, 40, 102, ?

$-10 + (2^2 - 2) = -8$

$-8 + (4^2 - 2) = 6$

$6 + (6^2 - 2) = 40$

$40 + (8^2 - 2) = 102$

$102 + (10^2 - 2) = 200$

So Answer is 200

Q-7

-(a)-

20% of $x = y$

$\frac{20}{100} x = y$

$0.20x = y \rightarrow (1)$

Y 100 of 20

$\frac{y}{100} \times 20 \rightarrow (2)$

Puting value of y in Eq (2)

$= \frac{0.20.x}{100.} \times 20$

$= 0.04x$

-(b)-

$Avg = \frac{P+Q}{2} = 5050$

$P+Q \; Avg = 10100 \rightarrow (1)$

$Avg \; \frac{Q+R}{2} = 6250 \Rightarrow Q+R = 12500 \rightarrow (2)$

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Avg $\frac{P+R}{2} = 5200$

$P+R = 10400 \rightarrow (3)$

Adding Eq (1), (3) and Subtracting (2)

~~$P+Q+Q+R+P+R = 10400+12500+10400$~~

$P+Q+P+R-Q-R = 10400+10400-12500$

$2P = 8000$

$P = 4000$

Therefore Salary of P = 4000 RS

-(c)-

Probality of two heads $= \frac{105}{500} \Rightarrow 0.21$

Probality of one head $= \frac{275}{500} \Rightarrow 0.55$

Probality of No head $= \frac{120}{500} \Rightarrow 0.24$

-(d)-

Let James x and James dad y

$y = 4x \rightarrow (1)$

in 14 years

James age $= x+14$

James dad age $= y+14$

$2(x+14) = (y+14)$

$2x+28 = y+14$

$2x+28 = 4x+14$ Puting value of y

$2x = 14$

$x = 7$

Puting value x in Eq (1)

$y = 4(7) = 28$

so James age = 7 $\Rightarrow$ Sum of age = 7+28

James Father age = 28 = 35

Add given, asked, solution, formula, answer
At least one side for a5 mark part
Avoid cutting
Good luck!