

AFCAT Memory Based Paper - 27 Aug 2021

- Q1** The average score of a cricketer in 10 matches is 50 runs, if his average score in first 6 matches is 40 runs, find the average score in last 4 matches.
(A) 60 (B) 55
(C) 70 (D) 65
- Q2** Speed of a train is 40% more than the speed of a car. Both start from point P at the same time and reach point Q, at the same time. P and Q are 280 km apart from each other. On the way train stops for 60 minutes at a station. What is the speed of the train?
(A) 110 km/hr (B) 115 km/hr
(C) 108 km/hr (D) 112 km/hr
- Q3** A dishonest seller claims to trade his goods at cost price but uses a weight of 980 gms for 1kg. Find his gain percent.
(A) 2.04% (B) 2.50%
(C) 3.06% (D) 2.26%
- Q4** If the compound interest is Rs. 2100 on a certain principal for 2 years at the rate of 10% per annum compounded annually. What will be the simple interest on the same principal for the same rate and for the same time period?
(A) Rs. 1800 (B) Rs. 2000
(C) Rs. 2050 (D) Rs. 1850
- Q5** If $5 \times 5 + 2 \times 5 \times x + 2 \times 2 = 49$, then find the value of x?
(A) 5 (B) 2
(C) -2 (D) -5
- Q6** A and B alone can do a piece of work in 10 and 30 days respectively. They started the work together and A left after 2 days of starting the work. B finished the remaining work alone. In how many days was the work completed?
(A) 28 days (B) 24 days
(C) 25 days (D) 22 days
- Q7** If $\frac{P}{4} = \frac{Q}{5} = \frac{R}{7}$, then the value of $\frac{Q+R-P}{P}$ is
(A) 3 (B) 4
(C) 2 (D) 5
- Q8** Total students in a School is 820. The ratio of boys and girls is 22 : 19. This year the performance of the school is good. So, two consecutive year the number of girls increases by 10% and 50% respectively. Find the ratio of present boys and Girls after 2 years is.
(A) 114:40 (B) 80:57
(C) 57:80 (D) 40:57
- Q9** The simple interest on a sum after 3 years is Rs. 600. If the amount on the sum is two times the sum after 5 years then find the sum.
(A) Rs. 1000 (B) Rs. 1200
(C) Rs. 1500 (D) Rs. 1600
- Q10** A person covers $(1/5)^{th}$ of the distance by 20 km/h , $(1/4)^{th}$ of the distance by 10 km/h and remaining distance by 60 km/h . Find average speed of the person.
(A) 36 km/h (B) 32.45 km/h
(C) 22.64 km/h (D) 39 km/h
- Q11** A purchases an article for Rs. 400 and spends Rs. 110 on its repair. He marks the price in such a way that after giving a discount of 15% he gains 25%. What is the marked price of the article?
(A) Rs. 800 (B) Rs. 850
(C) Rs. 750 (D) Rs. 825
- Q12** 6 men can complete a piece of work in 10 days, whereas 10 women alone take 15 days to complete the same piece of work. Find the number of days taken by 6 men and 10 women together to complete the piece of work.
(A) 6 days (B) 5 days
(C) 8 days (D) 7 days



Q13 Find the average of first 40 natural numbers.

- (A) 20 (B) 40.5
(C) 20.5 (D) 41

Q14 A can do a work in 20 days and B in 5 days. If they work on it together for 3 days, then what fraction of work is left?

- (A) $\frac{1}{2}$ (B) $\frac{3}{4}$
(C) $\frac{4}{5}$ (D) $\frac{1}{4}$

Q15 A, B and C can alone do a task in 75, 150 and 125 days respectively. A and B together work for 30 days and leave the task incomplete. C resumes it and finishes it alone. How many days did C take to finish it?

- (A) 100 (B) 50
(C) 60 (D) 80

Q16 Two trains leave P and Q towards Q and P at same time. Speeds of train moving from P and Q is 25 km/hr and 30 km/hr respectively. When

they meet then it is known that the train coming from Q has travelled 10 km distance more than a train coming from P. What is the distance between P and Q?

- (A) 100 km (B) 110 km
(C) 120 km (D) 90 km

Q17 X sells a hard disk for Rs. 5,000. His profit percent increases by 15% if he sells it for Rs. 5,600. What is the cost price of the hard disk.

- (A) Rs. 3600 (B) Rs. 4000
(C) Rs. 4500 (D) Rs. 4800

Q18 The sum of ages of father and a son is 86 years. If 19 years ago father's age was five times the age of his son. If the son got married to a girl who is 6 years younger than him, then what will be the ratio of his age and his wife's age?

- (A) 7 : 9 (B) 5 : 6
(C) 9 : 7 (D) 6 : 5



Answer Key

Q1 (D)
Q2 (D)
Q3 (A)
Q4 (B)
Q5 (B)
Q6 (B)
Q7 (C)
Q8 (D)
Q9 (A)

Q10 (C)
Q11 (C)
Q12 (A)
Q13 (C)
Q14 (D)
Q15 (B)
Q16 (B)
Q17 (B)
Q18 (C)



[Android App](#) | [iOS App](#) | [PW Website](#)



Hints & Solutions

Q1 Text Solution:

To find the average score in the last 4 matches, let's denote the total score in all 10 matches as T .

Given:

- Average score in 10 matches = 50 runs
- Total score in 10 matches = $50 \times 10 = 500$ runs
- Average score in first 6 matches = 40 runs

Let S_1 be the total score in the first 6 matches.

Since the average score in the first 6 matches is 40 runs:

$$S_1 = 40 \times 6 = 240 \text{ runs}$$

Now, let S_2 be the total score in the last 4 matches.

Since the total score in all 10 matches is 500 runs:

$$S_1 + S_2 = 500$$

$$240 + S_2 = 500$$

$$S_2 = 500 - 240$$

$$S_2 = 260 \text{ runs}$$

Now, calculate the average score in the last 4 matches:

$$\text{Average score in last 4 matches} = \frac{S_2}{4} = \frac{260}{4} = 65$$

Hence, the correct answer is option (d), i.e 65

Q2 Text Solution:

Calculation:

To find the speed of the train, let's denote:

- Speed of the car as x km/h.

Given:

- Speed of the train is 40% more than the speed of the car, which means the speed of the train is $(1.4x)$ km/h.
- Distance from P to Q is 280 km.
- Both the car and train start from point P and reach point Q at the same time.
- The train stops for 60 minutes (1 hour) at a station.

Let's calculate the time taken by both the car and the train to travel from P to Q.

1. **Time taken by the car:**

$$\text{Time taken by car} = \frac{\text{Distance}}{\text{Speed}} = \frac{280}{x} \text{ hours}$$

2. **Time taken by the train:**

The train travels at a speed of $(1.4x)$ km/h. However, it stops for 1 hour during the journey. Therefore, the effective time the train is moving is reduced by 1 hour.

$$\text{Time taken by train} = \frac{\text{Distance}}{\text{Speed}} = \frac{280}{1.4x} \text{ hours}$$

Since the train stops for 1 hour, the actual moving time of the train is:

$$\text{Actual time taken by train} = \frac{280}{1.4x} - 1 \text{ hour}$$

Now, according to the problem statement, both the car and the train reach point Q at the same time. Therefore, the time taken by the car and the actual time taken by the train must be equal.

Equating these two expressions:

$$\frac{280}{x} = \frac{280}{1.4x} - 1$$

Let's solve for x :

1. Simplify the equation:

$$\frac{280}{x} = \frac{200}{x} - 1$$

2. Add $(\frac{280}{x})$ to both sides:

$$\frac{280}{x} + 1 = \frac{200}{x}$$



3. Multiply both sides by (x) to eliminate the fractions:

$$280 + x = 200$$

4. Subtract (200) from both sides:

$$80 = x$$

Therefore, the speed of the car (x) is (80) km/h.

5. Now, calculate the speed of the train, which is $(1.4x)$:

$$\text{Speed of the train} = 1.4 \times 80 = 112 \text{ km/h}$$

Hence, the correct answer is option (d), i.e 112k/h

Q3 Text Solution:

Calculation:

To find the gain percent of the dishonest seller who uses a weight of 980 g for 1 kg, we need to calculate the actual cost price and the selling price based on this deception.

Given:

- 1 kg is claimed to be sold at the cost price, but the actual weight given is 980 g.

Let's denote:

- Cost price of 1 kg of goods = (C) (in rupees, for example)

- Selling price of 1 kg of goods = (S) (in rupees, for example)

The actual cost price per gram is:

$$\text{Actual cost price per gram} = \frac{C}{1000}$$

Since the seller gives only 980 g instead of 1000 g (1 kg), the actual cost price the buyer pays for 1 kg is:

$$\text{Actual cost price for 1 kg} = \frac{980}{1000} \times C = 0.98C$$

However, the seller claims to sell at the cost price (C) for 1 kg.

Therefore, the gain made by the seller per 1 kg is:

$$\text{Gain} = S - 0.98C$$

Now, to find the gain percent:

$$\text{Gain percent} = \left(\frac{\text{Gain}}{\text{Actual cost price for 1 kg}} \right) \times 100$$

Substitute the values:

$$\text{Gain percent} = \left(\frac{S - 0.98C}{0.98C} \right) \times 100$$

Let's assume a hypothetical example to illustrate:

- Suppose the cost price (C) is 100 rupees.

- The selling price (S) is 100 rupees (since the seller claims to sell at cost price).

Then,

$$\text{Actual cost price for 1 kg} = 0.98 \times 100 = 98 \text{ rupees}$$

$$\text{Gain} = S - 0.98C = 100 - 98 = 2 \text{ rupees}$$

$$\text{Gain percent} = \left(\frac{2}{98} \right) \times 100 \approx 2.04\%$$

Hence, the correct answer is option (a), i.e 2.04%

Q4 Text Solution:

Calculation:

To find the simple interest on the same principal, for the same rate, and for the same time period as given for compound interest, we need to use the relationship between compound interest (CI) and simple interest (SI).

Given:

- Principal amount $(P) = (P)$

- Rate of interest $(R) = 10\%$ per annum $= 10/100 = 0.1$

- Time period $(T) = 2$ years

- Compound Interest $(CI) = \text{Rs. } 2100$

First, let's find the principal amount (P) using the formula for compound interest:

$$CI = P \left(1 + \frac{R}{100} \right)^T - P$$

Substitute the given values:

$$2100 = P \left(1 + \frac{10}{100} \right)^2 - P$$

Simplify:

$$2100 = P \left(1.1 \right)^2 - P$$

$$2100 = P \cdot 1.21 - P$$

$$2100 = 0.21P$$



Now, solve for P:

$$P = \frac{2100}{0.21}$$

$$P = 10000$$

So, the principal amount (P) is Rs. 10000.

Now, let's find the Simple Interest (SI) for the same principal, rate, and time period:

$$SI = P \cdot R \cdot T$$

Substitute the values of P, R, and T:

$$SI = 10000 \cdot 0.1 \cdot 2$$

$$SI = 10000 \cdot 0.2$$

$$SI = 2000$$

Hence, the correct answer is option (b), i.e Rs. 2000

Q5 Text Solution:

Calculation:

Given equation:

$$5 \times 5 + 2 \times 5 \times x + 2 \times 2 = 49$$

Calculate each part:

$$25 + 10x + 4 = 49$$

Combine like terms:

$$29 + 10x = 49$$

Subtract 29 from both sides:

$$10x = 20$$

Divide both sides by 10:

$$x = 2$$

Hence, the correct answer is option (b), i.e 2

Q6 Text Solution:

Calculation:

Let's find the rate at which A and B work individually.

- A can complete the work in 10 days, so his rate of work is $\frac{1}{10}$ of the work per day.

- B can complete the work in 30 days, so his rate of work is $\frac{1}{30}$ of the work per day.

When A and B work together, their combined rate is:

$$\text{Combined rate} = \frac{1}{10} + \frac{1}{30} = \frac{3}{30} + \frac{1}{30} = \frac{4}{30} = \frac{2}{15}$$

This means together they can complete $\frac{2}{15}$ of the work per day.

Now, let's calculate how much work was completed in the first 2 days when A and B worked together:

$$\text{Work done in 2 days} = 2 \times \frac{2}{15} = \frac{4}{15}$$

So, after 2 days, $\frac{11}{15}$ of the work is still remaining.

Now, B works alone to complete the remaining $\frac{11}{15}$ of the work. His rate of work is $\frac{1}{30}$ of the work per day.

Let t be the number of days B takes to complete the remaining work:

$$\frac{11}{15} = t \times \frac{1}{30}$$

$$t = \frac{11}{15} \times 30$$

$$t = 22$$

Therefore, B takes 22 days to complete the remaining work alone.

Total time taken to complete the work:

$$\text{Total time} = \text{Time A and B worked together} + \text{Time B worked alone}$$

$$\text{Total time} = 2 + 22 = 24$$

Hence, the correct answer is option (b), i.e 24 days

Q7 Text Solution:

Calculation:

Given:

$$\frac{P}{4} = \frac{Q}{5} = \frac{R}{7}$$

Let's denote this common ratio by k :

$$\frac{P}{4} = k, \quad \frac{Q}{5} = k, \quad \frac{R}{7} = k$$

From these equations, we can express P , Q , and R in terms of k :

$$P = 4k, \quad Q = 5k, \quad R = 7k$$

Now, we need to find the value of $\frac{Q + R - P}{P}$.

Substitute the values of P , Q , and R :

$$Q + R - P = 5k + 7k - 4k = 8k$$

Now, substitute $P = 4k$ into $\frac{Q + R - P}{P}$:

$$\frac{Q + R - P}{P} = \frac{8k}{4k} = 2$$

Therefore, $\frac{Q + R - P}{P}$ is 2.

Hence, the correct answer is option (c), i.e 2



Q8 Text Solution:**Calculation:**

First, let's find the number of boys and girls in the school based on the given ratio.

Let the number of boys be $(22x)$ and the number of girls be $(19x)$, where (x) is a common multiple.

Given that the total number of students is 820, we have the equation:

$$22x + 19x = 820$$

$$41x = 820$$

$$x = \frac{820}{41}$$

$$x = 20$$

So, the number of boys $(= 22 \times 20 = 440)$ and the number of girls $(= 19 \times 20 = 380)$.

Now, we'll calculate the number of girls after two consecutive years of increases.

****First increase (10% increase):****

$$\text{Girls after 1st year} = 380 + 0.1 \times 380 = 380 + 38 = 418$$

****Second increase (50% increase):****

$$\text{Girls after 2nd year} = 418 + 0.5 \times 418 = 418 + 209 = 627$$

Now, calculate the ratio of present boys to girls after 2 years:

$$\text{Ratio of boys to girls after 2 years} = \frac{440}{627}$$

To simplify the ratio:

$$\text{Ratio of boys to girls after 2 years} = \frac{440 \div 11}{627 \div 11} = \frac{40}{57}$$

Hence, the correct answer is option (d), i.e 40:57

Q9 Text Solution:**Calculation:****Given:**

- Simple interest in 3 years = Rs. 600
- Simple interest after 5 years is twice the principal.

Solution:

- Let the principal amount be Rs. x .
- Amount after 5 years = $2x$ (since interest is twice the principal)
- Simple interest after 5 years = $2x - x = x$

- Rate (R) = 20% (calculated from the formula for simple interest)

- Using the given simple interest for 3 years:

$$600 = \frac{x \times 20 \times 3}{100}$$

Solving for x :

$$x = \frac{600 \times 100}{20 \times 3} = \text{Rs. } 1000$$

Hence, the correct answer is option (a), i.e Rs. 1000.

Q10 Text Solution:**Calculation:****Given:**

- The person covers $\frac{1}{5}$ th of the distance at (20) km/h.

- The person covers $\frac{1}{4}$ th of the distance at (10) km/h.

- Remaining distance is covered at (60) km/h.

Let's denote the total distance as (D) .

Calculate each segment of the distance:

Total distance $(D = \text{LCM}(4, 5) = 20)$ units (assuming distance unit for simplicity).

- Distance covered at (20) km/h:

$$\text{Distance}_1 = \frac{1}{5} \times D = \frac{1}{5} \times 20 = 4 \text{ units.}$$

- Distance covered at (10) km/h:

$$\text{Distance}_2 = \frac{1}{4} \times D = \frac{1}{4} \times 20 = 5 \text{ units.}$$

- Remaining distance:

$$\text{Distance}_3 = D - \text{Distance}_1 - \text{Distance}_2 = 20 - 4 - 5 = 11 \text{ units.}$$

Calculate the time taken for each segment:

- Time taken for (Distance_1) at (20) km/h:

$$\text{Time}_1 = \frac{\text{Distance}_1}{\text{Speed}_1} = \frac{4}{20} = 0.2 \text{ hours.}$$

- Time taken for (Distance_2) at (10) km/h:

$$\text{Time}_2 = \frac{\text{Distance}_2}{\text{Speed}_2} = \frac{5}{10} = 0.5 \text{ hours.}$$

- Time taken for (Distance_3) at (60) km/h:

$$\text{Time}_3 = \frac{\text{Distance}_3}{\text{Speed}_3} = \frac{11}{60} \text{ hours.}$$



Calculate the total time taken:

$$\text{Total Time} = \text{Time}_1 + \text{Time}_2 + \text{Time}_3 = 0.2 + 0.5 + \frac{11}{60}$$

Convert $\frac{11}{60}$ hours to decimal:

$$\frac{11}{60} \approx 0.1833$$

$$\text{Total Time} = 0.2 + 0.5 + 0.1833 = 0.8833 \text{ hours.}$$

Calculate the average speed:

$$\text{Average Speed} = \frac{\text{Total Distance}}{\text{Total Time}}$$

Total Distance $(= D = 20)$ units (assuming distance unit for simplicity).

$$\text{Average Speed} = \frac{20}{0.8833}$$

Calculate the approximate value:

$$\text{Average Speed} \approx \frac{20}{0.8833} \approx 22.64 \text{ km/hr.}$$

Therefore, the average speed of the person is approximately $\boxed{22.64 \text{ km/hr}}$. This completes the solution, detailing each step from calculation of distances, times, to finding the average speed.

Hence, the correct answer is option (c), i.e 22.64 km/h

Q11 Text Solution:

Calculation:

Let's denote the marked price of the article as M .

A purchased the article for Rs. 400 and spent Rs. 110 on its repair. Therefore, the total cost price C for A is:

$$C = 400 + 110 = 510$$

A gives a discount of 15% on the marked price M . So, the selling price after the discount is:

$$\text{Selling Price} = M - 0.15M = 0.85M$$

It's given that after giving the discount, A gains 25% profit. This means the selling price is 125% of the cost price C :

$$1.25 \times C = 1.25 \times 510 = 637.5$$

Setting the selling price equal to the calculated value:

$$0.85M = 637.5$$

Solving for M :

$$M = \frac{637.5}{0.85}$$

$$M = 750$$

Therefore, the marked price of the article is Rs. 750.

Hence, the correct answer is option (c), i.e 750

Q12 Text Solution:

Calculation:

To find the number of days taken by 6 men and 10 women together to complete the work, we'll first determine the rates at which each group works.

Let's start with the given information:

- 6 men can complete the work in 10 days.

- 10 women can complete the work in 15 days.

From this information, we can calculate the following:

- Rate of 1 man per day: $\frac{1}{6 \times 10} = \frac{1}{60}$ of the work per day.

- Rate of 1 woman per day: $\frac{1}{10 \times 15} = \frac{1}{150}$ of the work per day.

Now, to find the combined rate of 6 men and 10 women working together:

$$\text{Combined rate per day} = 6 \times \frac{1}{60} + 10 \times \frac{1}{150}$$

Let's compute this step-by-step:

$$6 \times \frac{1}{60} = \frac{6}{60} = \frac{1}{10}$$

$$10 \times \frac{1}{150} = \frac{10}{150} = \frac{1}{15}$$

$$\text{Combined rate per day} = \frac{1}{10} + \frac{1}{15}$$

To add these fractions, find a common denominator:

$$\frac{1}{10} + \frac{1}{15} = \frac{3}{30} + \frac{2}{30}$$



$$\frac{1}{30} = \frac{5}{5 \times 30} = \frac{1}{6}$$

∴

So, the combined rate of 6 men and 10 women working together is $\left(\frac{1}{6}\right)$ of the work per day.

Now, to find out how many days it will take for them to complete the entire work together:

∴

$$\text{Number of days required} = \frac{1}{\left(\frac{1}{6}\right)} = 6$$

∴

Therefore, 6 men and 10 women together will take $\boxed{6}$ days to complete the piece of work.

Hence, the correct answer is option (a), i.e 6 days

Q13 Text Solution:

Calculation:

To find the average of the first 40 natural numbers, we can use the formula for the average of an arithmetic series. The first 40 natural numbers are $1, 2, 3, \dots, 40$.

The sum of the first n natural numbers is given by:

$$S_n = \frac{n(n+1)}{2}$$

For $n = 40$:

$$S_{40} = \frac{40 \times 41}{2} = 820$$

The average is the sum divided by the number of terms:

$$\text{Average} = \frac{S_{40}}{40} = \frac{820}{40} = 20.5$$

Therefore, the average of the first 40 natural numbers is 20.5 .

Hence, the correct answer is option (c), i.e 20.5

Q14 Text Solution:

Calculation:

A's work rate: $\left(\frac{1}{20}\right)$ per day.

B's work rate: $\left(\frac{1}{5}\right)$ per day.

Combined work rate: $\left(\frac{1}{20} + \frac{1}{5}\right) = \frac{1}{4}$ per day.

Work done in 3 days: $3 \times \frac{1}{4} = \frac{3}{4}$.

Fraction of work left: $1 - \frac{3}{4} = \frac{1}{4}$.

Q15 Text Solution:

Calculation:

The rate at which A works is $\left(\frac{1}{75}\right)$ of the task per day, and B works at $\left(\frac{1}{150}\right)$ of the task per day. Together, A and B work at a combined rate of $\left(\frac{1}{75} + \frac{1}{150}\right) = \frac{1}{50}$ of the task per day.

In 30 days, A and B complete $30 \times \frac{1}{50} = \frac{3}{5}$ of the task. The remaining task is $1 - \frac{3}{5} = \frac{2}{5}$.

C works at a rate of $\left(\frac{1}{125}\right)$ of the task per day. To complete the remaining $\frac{2}{5}$ of the task, C takes $\frac{\frac{2}{5}}{\frac{1}{125}} = \frac{2}{5} \times 125 = 50$ days.

Therefore, C took 50 days to finish the task.

Hence, the correct answer is option (b), i.e 50

Q16 Text Solution:

Calculation:

Let's the distance between P and Q as D .

Let the time it takes for the two trains to meet be t hours.

The speed of the train moving from P to Q is 25 km/hr, and the speed of the train moving from Q to P is 30 km/hr.

When the trains meet, the train from P to Q has traveled $25t$ kilometers, and the train from Q to P has traveled $30t$ kilometers.

According to the problem, the train from Q to P has traveled 10 kilometers more than the train from P to Q:

$$30t = 25t + 10$$

Solving for t :

$$30t - 25t = 10$$

$$5t = 10$$

$$t = 2$$

Now, to find the distance D , we can use the total distance traveled by both trains:

$$D = 25t + 30t$$

$$D = 25 \times 2 + 30 \times 2$$

$$D = 50 + 60$$

$$D = 110$$

Therefore, the distance between P and Q is 110 kilometers.



Q17 Text Solution:**Let:**the cost price of the hard disk be (C) .**Calculation:**

When X sells the hard disk for Rs. 5,000, let's assume his profit percentage is $(P\%)$.

We know the selling price (SP) and profit percentage $(P\%)$:

$$5000 = C + \frac{P}{100} \times C$$

$$5000 = C \left(1 + \frac{P}{100}\right)$$

When X sells the hard disk for Rs. 5,600, his profit percentage increases by 15%. So, the new profit percentage is $(P + 15\%)$.

We know the new selling price (SP) and new profit percentage $(P + 15\%)$:

$$5600 = C + \frac{P + 15}{100} \times C$$

$$5600 = C \left(1 + \frac{P + 15}{100}\right)$$

$$5600 = C \left(1 + \frac{P}{100} + \frac{15}{100}\right)$$

$$5600 = C \left(1 + \frac{P}{100} + 0.15\right)$$

Now we have two equations:

$$5000 = C \left(1 + \frac{P}{100}\right)$$

$$5600 = C \left(1 + \frac{P}{100} + 0.15\right)$$

Let's denote $\left(1 + \frac{P}{100}\right)$ by (k) :

$$5000 = Ck$$

$$5600 = C(k + 0.15)$$

From the first equation, we get:

$$k = \frac{5000}{C}$$

Substitute this into the second equation:

$$5600 = C \left(\frac{5000}{C} + 0.15\right)$$

$$5600 = 5000 + 0.15C$$

$$5600 - 5000 = 0.15C$$

$$600 = 0.15C$$

$$C = \frac{600}{0.15}$$

$$C = 4000$$

Therefore, the cost price of the hard disk is Rs. 4000.

Q18 Text Solution:**Calculation:**

Let the father's age be (F) and the son's age be (S) . We know:

$$F + S = 86$$

Nineteen years ago, the father's age was five times the son's age:

$$F - 19 = 5(S - 19)$$

$$F - 19 = 5S - 95$$

$$F = 5S - 76$$

Substituting $(F = 5S - 76)$ into $(F + S = 86)$:

$$(5S - 76) + S = 86$$

$$6S - 76 = 86$$

$$6S = 162$$

$$S = 27$$

Then,

$$F = 5 \times 27 - 76$$

$$F = 135 - 76$$

$$F = 59$$

The son's wife is 6 years younger than the son:

$$27 - 6 = 21$$

The ratio of the son's age to his wife's age:

$$\frac{27}{21} = \frac{9}{7}$$

Thus, the ratio is $(9:7)$.

Hence, the correct answer is option (c), i.e $9:7$


[Android App](#)
[iOS App](#)
[PW Website](#)
