IMP MCQs Lecture 1

Chp4 Math for Finance

CA. Pranav Popat

Schedule

Date	Day	Chapter to be Covered
05-Aug-25	Tue	Chp4 Math for Finance
07-Aug-25	Thu	Chp13 Statistical Description of Data
09-Aug-25	Sat	Chp14 Central Tendency & Dispersion
11-Aug-25	Mon	Chp17 Correlation and Regression
13-Aug-25	Wed	Chp12 Blood Relations and Chp10 Direction Test
15-Aug-25	Fri	Chp11 Seating Arrangements & Chp9 Number Series…
17-Aug-25	Sun	Chp1 Ratio Proportion Indices Logarithm
19-Aug-25	Tue	Chp18 Index Numbers and Chp6 Sequence and Series
21-Aug-25	Thu	Chp2 Equations & Chp3 Linear Inequalities
23-Aug-25	Sat	Chp5 Permutations & Combinations
25-Aug-25	Mon	Chp7 Set Relation Functions
27-Aug-25	Wed	Chp15 Probability and Chp16 Theoretical Distribution

24 Days Challenge

24 DAYS QA CHALLENGE

QA (Math, LR and Stats) **BY CA. PRANAV POPAT**

CA FOUNDATION SEP 2025

Day Numbe	Date	Day	Title	Video Link	PDF Link	Duration (Hours)
1	4-Aug-25	Mon	Revision of Chp4 Math for Finance (Self/ One Shot)	Play	PDF	3:02:00
2	5-Aug-25	Tue	IMP MCQs of Chp4 Math for Finance (Live on YT)	coming soon	coming soon	
3	6-Aug-25	Wed	Revision of Chp13 Statistical Description of Data (Self/ One Shot)	Play	PDF	3:06:00
4	7-Aug-25	Thu	IMP MCQS of Chp13 Statistical Description of Data (Live on YT)	coming soon	coming soon	
5	8-Aug-25	Fri	Revision of Chp14 Central Tendency & Dispersion (Self/ One Shot)	Play	PDF	3:02:00
6	9-Aug-25	Sat	IMP MCQs of Chp14 Central Tendency & Dispersion (Live on YT)	coming soon	coming soon	
7	10-Aug-25	Sun	Revision of Chp17 Correlation Regression (Self/ One Shot)	Play	PDF	2:43:58
8	11-Aug-25	Mon	IMP MCQs of Chp17 (Live on YT)	coming soon	coming soon	
9	12-Aug-25	Tue	Revision of Chp12 Blood Relations (Self/ One Shot)	Play	PDF	1:24:49
			Revision of Chp10 Direction Test (Self/ One Shot)	Play	PDF	1:01:11
10	13-Aug-25	Wed	IMP MCQs of Chp12 and Chp10 (Live on YT)	coming soon	coming soon	
11	14-Aug-25	Thu	Revision of Chp11 Seating Arrangements (Self/ One Shot)	Play	PDF	1:48:40

let’s get started.

PYQ May 25

PYQ May 2025

(87) *There is 60% increase in amount in 6 years at simple interest. What will be the compound interest of ₹12000 after three years at the same rate?*

a. ₹2160 *b.* ₹3120

c. ₹3972 *d.* ₹6240

PYQ May 25

PYQ May 2025

(87) *There is 60% increase in amount in 6 years at simple interest. What will be the compound interest of ₹12000 after three years at the same rate?*

a. ₹2160 b. ₹3120

c. ₹3972 d. ₹6240

$A = 1.6P \quad t = 6 \text{ yrs}$

$A = P\left(1+\frac{rt}{100}\right) \Rightarrow 1.6P = P\left(1+\frac{r \times 6}{100}\right)$

$r = 10\%$

$CI = 12000\left[(1.1)^3 - 1\right] = 3972$

PYQ May 25

PYQ May 2025	
(89)	*The compound interest on a certain sum for 2 years at 10% per annum is ₹525. The simple interest on the same sum for double the time at half the rate percent per annum is*
	a. ₹400 *b.* ₹500
	c. ₹600 *d.* ₹800

PYQ May 25

PYQ May 2025

(89) *The compound interest on a certain sum for 2 years at 10% per annum is ₹525. The simple interest on the same sum for double the time at half the rate percent per annum is*

a. ₹400 b. ₹500

c. ₹600 d. ₹800

$525 = P[(1.1)^2 - 1]$

$P = 2500$

$SI = 2500 \times (2 \times 2) \times \frac{10}{2} = 500$

PYQ May 25

PYQ May 2025

(91) *A sum of ₹725 is lent in the beginning of a year at a certain rate of SI. After 8 months a sum of ₹362.5 more is lent but at the rate twice the former. At the end of the year, ₹33.5 is earned as interest from both the loans. What was the original rate of interest?*

a. 3.6% *b.* 4.54%

c. 3.46% *d.* 4.12%

PYQ May 25

PYQ May 2025

(91) *A sum of ₹725 is lent in the beginning of a year at a certain rate of SI. After 8 months a sum of ₹362.5 more is lent but at the rate twice the former. At the end of the year, ₹33.5 is earned as interest from both the loans. What was the original rate of interest?*

a. 3.6% b. 4.54%

c. ✓ 3.46% d. 4.12%

$$(725 \times \frac{r}{100} \times 1) + (362.5 \times \frac{2r}{100} \times \frac{4}{12}) = 33.5$$

$$7.25r + 2.41\overline{6}r = 33.5$$

$$r = 3.4655\%$$

PYQ May 25

PYQ May 2025

(92) *Shiv deposits ₹10,000 annually in a bank for 5 years, at 10% annual CI rate. Calculate approximate value of this series of deposits at the end of five years, if each deposit occurs at the beginning of the year.*

a. ₹61,050 *b.* ₹67,156

c. ₹71,050 *d.* ₹77,160

PYQ May 25

PYQ May 2025

(92) *Shiv deposits ₹10,000 annually in a bank for 5 years, at 10% annual CI rate. Calculate approximate value of this series of deposits at the end of five years, if each deposit occurs at the beginning of the year.*

a. ₹61,050 b. ₹67,156

c. ₹71,050 d. ₹77,160

$$FVAD = 10,000 \times \frac{(1.1)^5 - 1}{0.1} \times 1.1$$

$$= 67156$$

PYQ May 25

PYQ May 2025

(96) *Raju will pay installments of ₹3150 per month for the next 3 years towards his loan at an interest rate 12.4%, discounted monthly, what was the approximate amount of loan taken initially?*

a. ₹13,683.60 b. ₹9,742.29

c. ₹94345.17 d. ₹74,158.24

$i = \frac{12.4\%}{12} = 1.0333\%$

$n = 3y \times 12 = 36$

1 + i ÷ = = n times

GT

1.010333 ÷ = = GT

× 3150

PYQ May 25

PYQ May 2025

(96) *Raju will pay installments of ₹3150 per month for the next 3 years towards his loan at an interest rate 12.4%, discounted monthly, what was the approximate amount of loan taken initially?*

a.	*₹13,683.60*	*b.*	*₹9,742.29*
c ✓	*₹94345.17*	*d.*	*₹74,158.24*

$i = \frac{12.4\%}{12} = 1.033\%$; $n = 3 \times 12 = 36$

$PVAR = A_I \times PVAF\left(\frac{12.4\%}{12}, 36\right)$

$= 3150 \times 29.936$

$= 94300$

MTP 2 - May 25

MTP 2 – May 2025

(22) Find the present value of ₹500 due 10 years hence when interest of 10% is compounded half yearly?

a. ₹188.40 b. ₹193.94

c. ₹138.94 d. ₹50.00

later

CF
÷ 1+i
= = = n times

$i = \frac{10\%}{2} = 5\%$

$n = 10 \times 2 = 20$

500 ÷ 1.05 = = 20 times

≈ 188.44

MTP 2 - May 25

MTP 2 – May 2025

(22) *Find the present value of ₹500 due 10 years hence when interest of 10% is compounded half yearly?*

a. ✓	*₹188.40*	*b.*	*₹193.94*
c.	*₹138.94*	*d.*	*₹50.00*

$i = \frac{10}{2} = 5\%$

$n = 20$

$500 \times \frac{1}{(1.05)^{20}}$

$= 188.40$

MTP 2 - May 25

MTP 2 – May 2025

(24) *A person opened a savings bank account 4 months ago, which has now a balance of ₹21,315. If the bank pays 4.5% SI, how much money was deposited by him, initially?*

a. ₹21,000 b. ₹22,500

c. ₹315 d. None

P $\xrightarrow{4m}$ 21315 (A)

4.5% SI

$A = P(1 + \frac{rt}{100})$

$t = \frac{4}{12}$

MTP 2 - May 25

MTP 2 – May 2025

(24) *A person opened a savings bank account 4 months ago, which has now a balance of ₹21,315. If the bank pays 4.5% SI, how much money was deposited by him, initially?*

a. ₹21,000 ✓ b. ₹22,500

c. ₹315 d. None

$$A = P\left(1 + \frac{rt}{100}\right)$$

$$21315 = P\left(1 + \frac{4.5}{100} \times \frac{4}{12}\right)$$

$$P = 21000$$

PYQ Jan 2025

PYQ Jan 2025

(52) A certain amount at a rate of SI x, doubles in 5 years. At another rate of SI y, it becomes three times in 8 years. Then difference between these two interest rates is

a. 5% b. 8%

c. 3% d. 4%

(x)

A = 2P 5yr

(y)

A = 3P 8yr

PYQ Jan 2025

PYQ Jan 2025

(52) A certain amount at a rate of SI x, doubles in 5 years. At another rate of SI y, it becomes three times in 8 years. Then difference between these two interest rates is

a. 5% b. 8%

c. 3% d. 4%

$A = 2P$ in 5 years

$P(1 + \frac{r_1 \times 5}{100}) = 2P$

$r_1 = 20\%$

$A = 3P$ in 8 years

$P(1 + \frac{r_2 \times 8}{100}) = 3P$

$r_2 = 25\%$

$r_2 - r_1 = 5\%$

PYQ Jan 2025

PYQ Jan 2025

(62) *A certain amount is invested in a bank. What annual rate of interest compounded annually becomes 8 times of this investment in 5 years?*

a. 51.57% ✓ b. 5.15%

c. 15.15% d. 1.51%

$A = 8P \quad n = 5 \quad i = ?$

$P(1+i)^5 = 8P$

$(1+i)^5 = 8$

$(1+i) = 8^{1/5}$

$1+i = 1.5158$

$i = 0.5158$

8 √ 12 times − 1 ÷ 5

+1 X = X = X = 12 times

= 1.5158

PYQ Jan 2025

PYQ Jan 2025

(62) *A certain amount is invested in a bank. What annual rate of interest compounded annually becomes 8 times of this investment in 5 years?*

a. 51.57% b. 5.15%

c. 15.15% d. 1.51%

$A = 8P$

$P(1+i)^5 = 8P$

$(1+i)^5 = 8$

$(1+i) = 8^{1/5} = 1.5158$

$i = 51.58\%$

PYQ Jan 2025

PYQ Jan 2025

(64) *Sam invested ₹12,000 for 10 years in a financial company. At the end of 10th year his investment value is ₹18,000. The CAGR is (given $x^{1/n}$=1.0413)*

a. 41.40% *b.* 4.13%

c. 11.56% *d.* 12.06%

P n=10 A i=?

PYQ Jan 2025

PYQ Jan 2025

(64) *Sam invested ₹12,000 for 10 years in a financial company. At the end of 10th year his investment value is ₹18,000. The CAGR is (given $x^{1/n}=1.0413$)*

a.	*41.40%*	*b.* ✓	*4.13%*
c.	*11.56%*	*d.*	*12.06%*

$18000 = 12000(1+i)^{10}$

$(1+i)^{10} = 1.5$

$(1+i) = (1.5)^{1/10}$

$i = 1.0413 - 1 = 4.13\%$

PYQ Jan 2025

	PYQ Jan 2025
(65)	*Mr. A invested ₹20,000 in a bank at the rate of 4.5% p.a. He received ₹27,500 after the end of term. Find out the period?*
a.	*4.50 years*
b.	*8.34 years*
c.	*6.50 years*
d.	*8.10 years*

P

A

Prefer SI, ans → option

↓

CI

PYQ Jan 2025

PYQ Jan 2025

(65) *Mr. A invested ₹20,000 in a bank at the rate of 4.5% p.a. He received ₹27,500 after the end of term. Find out the period?*

a.	*4.50 years*	*b.* ✓	*8.34 years*
c.	*6.50 years*	*d.*	*8.10 years*

as no. of years given in fractions, first try using SI

$$A = P\left(1 + \frac{rt}{100}\right)$$

$$27500 = 20{,}000\left(1 + \frac{4.5 \times t}{100}\right)$$

$$t = 8.33 \text{ years}$$

MTP 2 - Jan 2025

MTP 2 – Jan 2025			
(25)	*The present value of ₹10,000 due in 2 years at 5% p.a. CI when the interest is paid on half-yearly basis is*		
	a. ₹9,070	*b.* ₹9,069	
	c. ₹9,060	*d.* None	

$i = 2.5\%$

$n = 4$

9059.5

MTP 2 - Jan 2025

MTP 2 – Jan 2025			
(25)	*The present value of ₹10,000 due in 2 years at 5% p.a. CI when the interest is paid on half-yearly basis is*		
	a. ₹9,070	*b.* ₹9,069	
	c. ₹9,060	*d.* None	

$i = \frac{5}{2} = 2.5\%$

$n = 2 \times 2 = 4$

PV of CF $= 10{,}000 \times \frac{1}{(1.025)^4}$

$= 9059.5$

PYQ Sep 2024

PYQ Sep 24

(91) *Kanta wants to accumulate ₹ 4,91, 300 in her savings account after three years. The rate of interest offered by bank is $6\frac{1}{4}$% per annum compounded annually. How much amount should she invest today to achieve her target amount?*

a. ₹ 4,37,500 *b.* ₹ 4,09,600

c. ₹ 46,900 *d.* ₹ 49,600

A

n=3

r = 6.25%

P = ?

PYQ Sep 2024

PYQ Sep 24

(91) *Kanta wants to accumulate ₹ 4,91, 300 in her savings account after three years. The rate of interest offered by bank is $6\frac{1}{4}\%$ per annum compounded annually. How much amount should she invest today to achieve her target amount?*

a.	*₹ 4,37,500*	*b.*	*₹ 4,09,600*
c.	*₹ 46,900*	*d.*	*₹ 49,600*

$491300 = P\,(1.0625)^3$

$P = 409600$

PYQ Sep 2024

PYQ Sep 24

(94) *At a certain rate of interest per annum, the difference between the compound interest and simple interest on ₹ 3,00,000 for two years is ₹ 480, then the rate of interest per annum is:*

a. 4% *b.* 2%

c. 6% *d.* 8%

$P(i)^2$

PYQ Sep 2024

PYQ Sep 24

(94) *At a certain rate of interest per annum, the difference between the compound interest and simple interest on ₹ 3,00,000 for two years is ₹ 480, then the rate of interest per annum is:*

a. 4% b. 2%

c. 6% d. 8%

shortcut formula for CI - SI for 2 years

$= P \times (i)^2$ or

$480 = 300,000 \times i^2$

$i = 0.04 = 4\%$

PYQ Jun 2024

PYQ June 24

The difference between the compound interest amount and the simple interest amount for a period of two years, at same interest rate r is

a. $P \times r^2$

b. $P \times \frac{r}{2}$

c. $P \times 2 \times r$

d. $P^2 \times r$

$i^0 = r$

$Pi^2 = Pr^2$

PYQ Jun 2024

PYQ June 24

The difference between the compound interest amount and the simple interest amount for a period of two years, at same interest rate r is

a. $P \times r^2$ ✓

b. $P \times \frac{r}{2}$

c. $P \times 2 \times r$

d. $P^2 \times r$

annual compound,

$i = r$

diff of CI - SI = Pr^2

PYQ Jun 2024/ RTP Sep 2024

PYQ June 24

If the interest rate on a loan is 1% per month, the effective annual rate of interest is:

a.	*12%*	*b.*	*12.36%*
c.	*12.68%*	*d.*	*12.84%*

$i = 1\%$

$(1+i)^{n} - 12$

PYQ Jun 2024/ RTP Sep 2024

PYQ June 24

If the interest rate on a loan is 1% per month, the effective annual rate of interest is:

a. 12% b. 12.36%

c. 12.68% d. 12.84%

$i = 1\%$ p.m (already i)

$E = [(1.01)^{12} - 1] \times 100 = 12.68\%$

PYQ Jun 2024

PYQ June 24

What is the present value of an investment that pays ₹ 400 at the end of three years and ₹ 500 at the end of 6 years?

a. ₹ 320 b. ₹ 335

c. ₹ 340 d. ₹ 280

$400 = P(1 + \frac{r \times 3}{100})$ — (i)

$500 = P(1 + \frac{r \times 6}{100})$ — (ii)

$$\frac{400}{500} = \frac{1 + \frac{3r}{100}}{1 + \frac{6r}{100}}$$

$400 + 2400r = 500 + 1500r$

$900r = 100, \quad r = 0.1111 = 11.11\%$

$400 = P(1 + \frac{11.11}{100} \times 3)$

$P = 300$ → SI

CI ?

PYQ Jun 2024

PYQ June 24

What is the present value of an investment that pays ₹ 400 at the end of three years and ₹ 500 at the end of 6 years?

a. ₹ 320 ✓ b. ₹ 335

c. ₹ 340 d. ₹ 280

$A = P(1+i)^n$

$400 = P(1+i)^3$ — (i)

$500 = P(1+i)^6$ — (ii)

squaring eq (i), $160{,}000 = P^2(1+i)^6$ — (iii)

divide eq (iii) / eq (ii)

$$\frac{160{,}000}{500} = \frac{P^2(1+i)^6}{P(1+i)^6} \Rightarrow P = 320$$

PYQ Jun 2024

PYQ June 24

At 8% compounded annually, how long will it take ₹ 750 to double?

a. 6.5 years
b. 48 months
c. ✓ 9 years
d. 12 years

$1500 = 750(1.08)^n$

$2 = (1.08)^n$

PYQ Jun 2024

PYQ June 24

At 8% compounded annually, how long will it take ₹ 750 to double?

a. 6.5 years
b. 48 months
c. 9 years ✓
d. 12 years

$i = 8\%$, $A = 2P$

$P(1.08)^n = 2P$

$(1.08)^n = 2$

try by option, $n = 9$ years

PYQ Jun 2024

PYQ June 24

You are considering two investments: Investment A yields 10% compounded quarterly, Investment B yields r% compounded semi-annually. Both investments have equal annual yields, Find r

a. 19.875 %
b. 10%
c. 10.38%
d. 10.125%

PYQ Jun 2024

PYQ June 24

You are considering two investments: Investment A yields 10% compounded quarterly, Investment B yields r% compounded semi-annually. Both investments have equal annual yields, Find r

a. 19.875 % b. 10%

c. 10.38% d ✓ 10.125%

annual yield = effective rate

eff rate of 10% p.a. quarterly

$$E = \left[\left(1 + \frac{10\%}{4}\right)^4 - 1\right] \times 100$$

$$= 10.3813\%$$

For Investment B,

$$E = \left[\left(1 + \frac{r\%}{2}\right)^2 - 1\right]$$

$$0.103813 = \left[\left(1 + \frac{r\%}{2}\right)^2 - 1\right]$$

$$1.103813 = \left(1 + \frac{r\%}{2}\right)^2$$

$$1 + \frac{r\%}{2} = \sqrt{1.103813}$$

$$r\% = 0.10125 = 10.125\%$$

PYQ Jun 2024

n=10 **PYQ June 24**

You bought a painting 10 years ago as an investment. You originally paid ₹ 85,000 for it. If you sold it for ₹ 4,84,050, what was your annual return on investment?

P A i=? CAGR

a. 47%
b. 4.7%
c. 19%
d. 12.8%

PYQ Jun 2024

PYQ June 24

You bought a painting 10 years ago as an investment. You originally paid ₹ 85,000 for it. If you sold it for ₹ 4,84,050, what was your annual return on investment?

a.	*47%*	*b.*	*4.7%*
c. ✓	*19%*	*d.*	*12.8%*

$484050 = 85000(1+i)^{10}$

by option c) 19%

MTP June 2024 Series 2

MTP June 24 Series II

A man invests an amount of ₹ 15,860 in the names of his three sons A, B and C in such a way that they get the same interest after 2,3 and 4 years respectively. If the rate of interest is 5%, then the ratio of amount invested in the name of A, B and C is.

a. 6 : 4 : 3
b. 3 : 4 : 6
c. 30 : 12 : 5
d. None of these

MTP June 2024 Series 2

MTP June 24 Series II

A man invests an amount of ₹ 15,860 in the names of his three sons A, B and C in such a way that they get the same interest after 2,3 and 4 years respectively. If the rate of interest is 5%, then the ratio of amount invested in the name of A, B and C is.

a. 6 : 4 : 3 ✓
b. 3 : 4 : 6
c. 30 : 12 : 5
d. None of these

Try with SI first,

$\frac{A}{P_1}$ $\frac{B}{P_2}$ $\frac{C}{P_3}$

$P_1 \times 5\% \times 2 = P_2 \times 5\% \times 3 = P_3 \times 5\% \times 4$

$0.1P_1 = 0.15P_2 = 0.2P_3$

$\frac{P_1}{P_2} = \frac{0.15}{0.10} = \frac{15}{10} = \frac{30}{20}$

$\frac{P_2}{P_3} = \frac{0.2}{0.15} = \frac{20}{15}$

$P_1 : P_2 : P_3 = 30 : 20 : 15$

$= 6 : 4 : 3$

MTP Dec 23 Series II

How long will it take for a principal to double if money is worth 12% compounded monthly?

a. 4.25 years.
b. 5.81 years
c. 6 years
d. None of these

$i = \frac{12}{12} = 1\%$

$A = 2P$

$2P = P(1.01)^n$

$(1.01)^n = 2$

$n = 70$

$= \frac{70}{12} = 5.83$ years

MTP Dec 23 Series II

How long will it take for a principal to double if money is worth 12% compounded monthly?

a. 4.25 years.
b. 5.81 years
c. 6 years
d. None of these

$r = 12\%$, $i = \frac{12}{12} = 1\%$

$A = 2P$

$P(1.01)^n = 2P$

$n = 70$

$n = \frac{70m}{12} = 5.83$ years

MTP Dec 23 Series II

A certain sum of money was put at S.I. for 2.5 years at a certain rate of S.I. p.a. Had it been put at 4% higher rate, it would have fetched ₹ 500 more. Find the sum of money.

a. ₹ 4,000
b. ✓ ₹ 5,000
c. ₹ 6,000
d. None of these

$P \times 4\% \times 2.5 = 500$

$P = 5000$

MTP Dec 23 Series II

A certain sum of money was put at S.I. for 2.5 years at a certain rate of S.I. p.a. Had it been put at 4% higher rate, it would have fetched ₹ 500 more. Find the sum of money.

a. ₹ 4,000
b. ₹ 5,000
c. ₹ 6,000
d. None of these

$P \times \frac{4}{100} \times 2.5 = 500$

$P = 5000$

MTP June 2024 Series 2

MTP June 24 Series II

What annual payment will discharge a debt of ₹ 770 due in ***5 years****, the rate of interest being 5% per annum* ***SI*** *?* → special

a. ₹ 150
b. ₹ 140
c. ₹ 130
d. None of these

MTP June 2024 Series 2

MTP June 24 Series II

What annual payment will discharge a debt of ₹ 770 due in **5 years**, the rate of interest being 5% per annum **SI** ?

a. ₹ 150 ✓ b. ₹ 140

c. ₹ 130 d. None of these

let annual paym. is 100

100 p.a. for 5 yrs ⟶ 500

Y_1 100+5+5+5+5 = 120

Y_2 100+5+5+5 = 115

Y_3 100+5+5 = 110

Y_4 100+5 = 105

Y_5 100 = 100

500

$\frac{100}{500} \times 770 = 140$

PYQ May 18

If ₹ 1,000 be invested at interest rate of 5% and the interest be added to the principal every 10 years, then the number of years in which it will amount to ₹ 2,000 is:

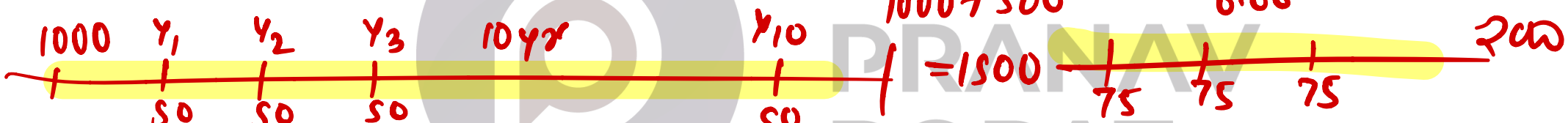
a. $16\frac{2}{3}$ *years*

b. $6\frac{1}{4}$ *years*

c. 16 *years*

d. $6\frac{2}{3}$ *years*

SI p.a. = 1000 × 5% = 50 p.a.



50 × 10 = 500

16.666

1500 × 5% = 75

1000 + 500 = 1500

6.66

2000 − 1500 = 500

$\frac{500}{75} = 6.66$

PYQ May 18

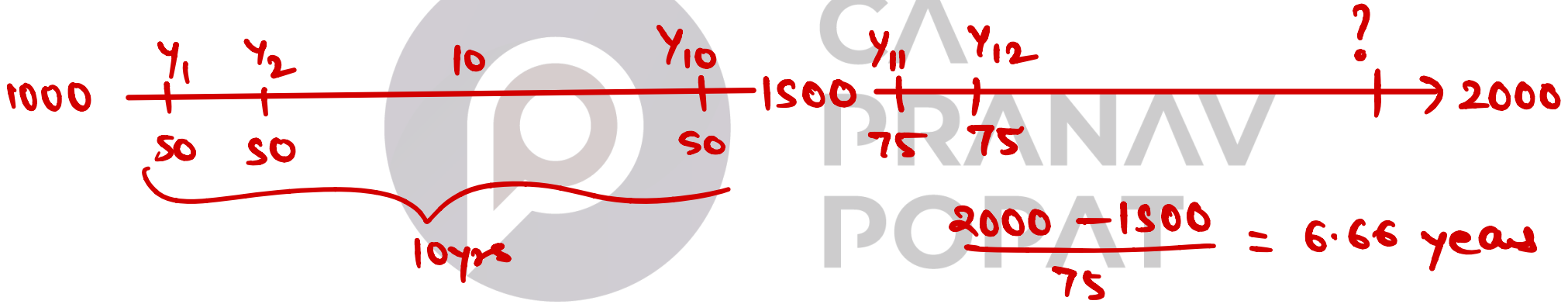
If ₹ 1,000 be invested at interest rate of 5% and the interest be added to the principal every 10 years, then the number of years in which it will amount to ₹ 2,000 is:

a. ✓ $16\frac{2}{3}$ *years*

b. $6\frac{1}{4}$ *years*

c. 16 *years*

d. $6\frac{2}{3}$ *years*



$\frac{2000-1500}{75} = 6.66$ years

$10 + 6.6 = 16.66$ yrs

MTP June 2024 Series 2

MTP June 24 Series II

Mr. X invests 'P' amount at Simple Interest rate 10% and Mr. Y invests 'Q' amount at Compound Interest rate 5% compounded annually. At the end of two years both get the same amount of interest, then the relation between two amounts P and Q is given by:

a. $P = \frac{41Q}{80}$

b. $P = \frac{41Q}{40}$

c. $P = \frac{41Q}{100}$

d. $P = \frac{41Q}{200}$

MTP June 2024 Series 2

MTP June 24 Series II

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$$X = Y$$

$$P \times 10\% \times 2 = Q \times [(1.05)^2 - 1]$$

$$0.2P = 0.1025Q$$

$$\frac{P}{Q} = \frac{0.1025}{0.2} = 0.5125$$

$$P = 0.5125 \times Q$$

$$= \frac{41}{80}$$