

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 Number	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 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



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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 |
| <input checked="" type="checkbox"/> | ₹3972 | d. | ₹6240 |



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

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

$$r = 10\%$$

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

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*

- | | | | |
|-----------|-------------|-----------|-------------|
| <i>a.</i> | <i>₹400</i> | <i>b.</i> | <i>₹500</i> |
| <i>c.</i> | <i>₹600</i> | <i>d.</i> | <i>₹800</i> |



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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 ^{4y}

- a. ₹400 ^{50%} b. ₹500
 c. ₹600 d. ₹800



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

$$P = 2500$$

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

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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 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%

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

$$7.25r + 2.4166r = 33.5$$

$$r = 3.4655\%$$

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 |



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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



$$\begin{aligned}
 FVAD &= CA \frac{10,000 \times (1.1)^5 - 1}{0.1} \times 1.1 \\
 &= 67156
 \end{aligned}$$

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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 |

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

$$n = 3y \times 12 = 36$$

$$1+i \div = = n \text{ times}$$

GT

$$1.010333 \div = = GT$$

X 3150



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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 |
| <input checked="" type="checkbox"/> | ₹94345.17 | d. | ₹74,158.24 |

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

$$\begin{aligned} \text{PVAR} &= A_I \times \text{PVAF} \left(\frac{12.4\%}{12}, 36 \right) \\ &= 3150 \times 29.936 \\ &= 94300 \end{aligned}$$



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

$$\frac{CF}{1+i} = n \text{ times}$$

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

$$n = 10 \times 2 = 20$$

$$500 \div 1.05 = 20 \text{ times}$$

$$\sim 188.44$$



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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

$$i = \frac{10}{2} = 5\%$$
$$n = 20$$

$$500 \times \frac{1}{(1.05)^{20}}$$
$$= 188.40$$



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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

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

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



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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



$$A = P \left(1 + \frac{rt}{100} \right)$$
$$21315 = P \left(1 + \frac{4.5 \times 4}{100 \times 12} \right)$$
$$P = 21000$$

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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)

$$A = 2P \quad 5yr$$

(y)

$$A = 3P \quad 8yr$$



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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

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

$$r_1 = 20\%$$

$A = 3P$ in 8 years

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

$$r_2 = 25\%$$

$$r_2 - r_1 = 5\%$$

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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%

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

$$\begin{aligned} P(1+i)^5 &= 8P \\ (1+i)^5 &= 8 \\ (1+i) &= 8^{1/5} \\ 1+i &= 1.5158 \\ i &= 0.5158 \end{aligned}$$

$$\begin{aligned} 8 \sqrt[5]{12 \text{ times}} - 1 \div 5 \\ + 1 \quad X = X = X = 12 \text{ times} \\ = 1.5158 \end{aligned}$$

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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%

$$A = 8P$$

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

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

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

$$i = 51.58\%$$

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PYQ Jan 2025

- (64) Sam invested $\text{₹}12,000$ for 10 years in a financial company. At the end of 10^{th} year his investment value is $\text{₹}18,000$. The CAGR is (given $x^{1/n}=1.0413$)
- Handwritten annotations: p above ₹12,000; $n=10$ above 10 years; A below ₹18,000; $i=?$ below The CAGR is*
- a. 41.40% b. 4.13%
- c. 11.56% d. 12.06%



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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% |



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

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

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

$$i = 1.0413 - 1 = 4.13\%$$

P

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

- | | | | |
|----|------------|----|------------|
| a. | 4.50 years | b. | 8.34 years |
| c. | 6.50 years | d. | 8.10 years |

Prefer SI,
 (as) → option
 ↓
 CI



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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?

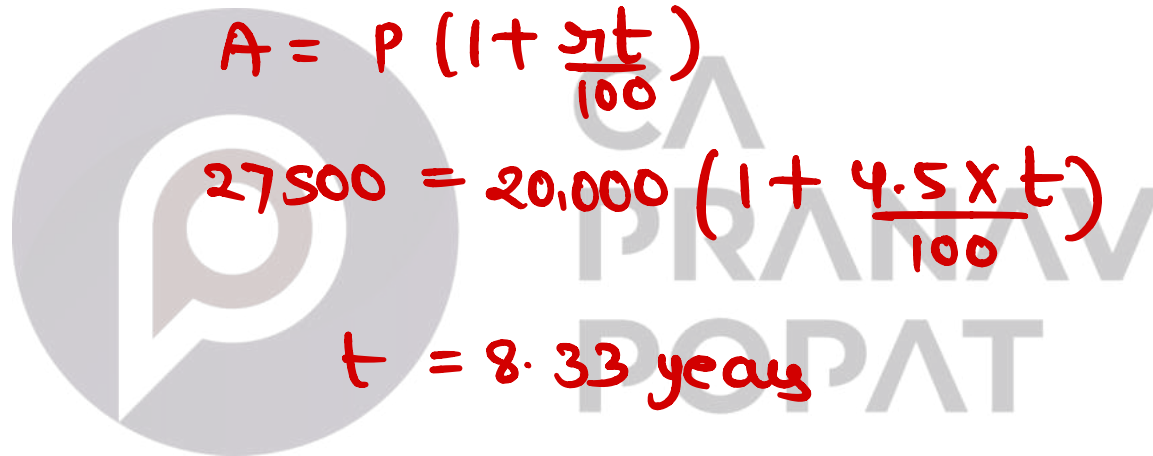
- a. 4.50 years ✓. 8.34 years
 c. 6.50 years d. 8.10 years

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

(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

$$i = 2.5\%$$

$$n = 4$$

$$9059.5$$



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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

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

$$n = 2 \times 2 = 4$$

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

$$= 9059.5$$



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PYQ Sep 24

(91) Kanta wants to accumulate ₹ 4,91,300 ^A 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

$n=3$
 $i=6.25\%$

$P=?$



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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

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

$$P = 409600$$



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PYQ Sep 24

$$P(i)^2$$

- (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% |



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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

$$= P \times (i)^2 \text{ or}$$

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

$$i = 0.04 = 4\%$$



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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. $P^2 \times r$

$$i = r$$

$$P i^2 = P r^2$$



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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,

$$i = 21$$

$$\text{diff of CI - SI} = P \cdot i^2$$



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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% |

$$i = 1\%$$

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



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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%

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

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



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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

$$400 = \cancel{P} \left(1 + \frac{r \times 3}{100} \right) \quad \text{--- (i)}$$

$$500 = \cancel{P} \left(1 + \frac{r \times 6}{100} \right) \quad \text{--- (ii)}$$

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

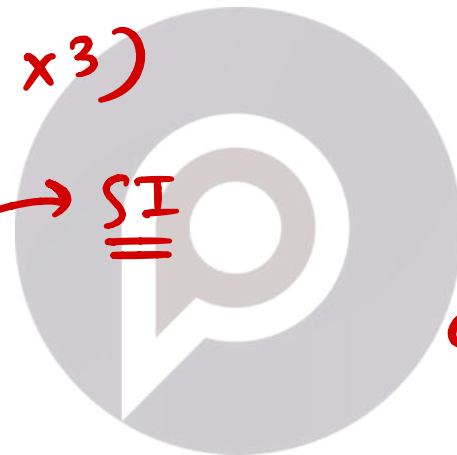
$$400 = P \left(1 + \frac{11.11}{100} \times 3 \right)$$

P = 300 → SI

$$\Rightarrow 400 + 2400r = 500 + 1500r$$

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

CI r



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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

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

$$400 = P(1+i)^3 \quad \text{--- (i)}$$

$$500 = P(1+i)^6 \quad \text{--- (ii)}$$

squaring eq (i), $160,000 = P^2(1+i)^6 \quad \text{--- (iii)}$

divide eq (iii) / eq (ii)

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

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

$$1500 = 750(1.08)^n$$

$$2 = (1.08)^n$$



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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



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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% |



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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,

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

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

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

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

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

$n=10$ 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?** A $i=?$ **LAGR**

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



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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%



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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



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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,

$$\frac{A}{P_1}$$

$$\frac{B}{P_2}$$

$$\frac{C}{P_3}$$

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

$$0.1 P_1 = 0.15 P_2 = 0.2 P_3$$

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

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

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

$$= 6 : 4 : 3$$



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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

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

$$A = 2P$$

$$2P = P(1.01)^n$$

$$(1.01)^n = 2$$

$$n = 70$$

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

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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

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

$$A = 2P$$

$$P(1.01)^n = 2P$$

$$n = 70$$

$$r = \frac{70m}{12} = 5.83 \text{ years}$$



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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

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

$$P = 5000$$



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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

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

$$P = 5000$$



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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



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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 \rightarrow SSO

$$Y_1 \quad 100 + 5 + 5 + 5 + 5 = 120$$

$$Y_2 \quad 100 + 5 + 5 + 5 = 115$$

$$Y_3 \quad 100 + 5 + 5 = 110$$

$$Y_4 \quad 100 + 5 = 105$$

$$Y_5 \quad 100 = 100$$

SSO

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

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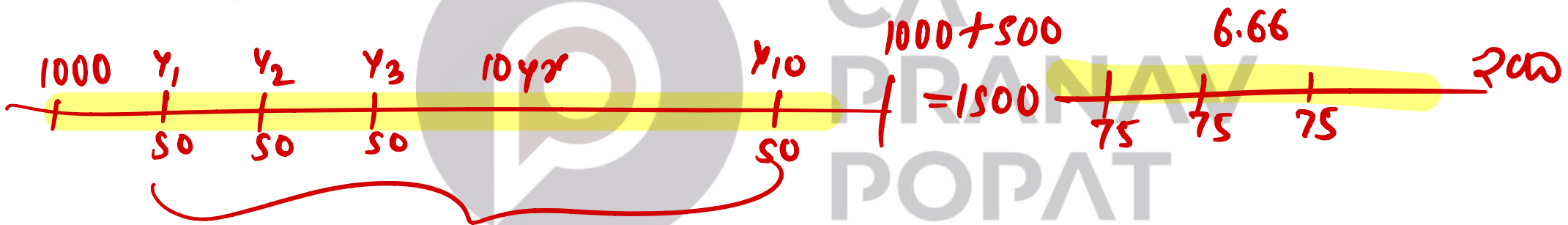
PYQ May 18

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

$$1500 \times 5\% = 75$$

$$SI \text{ p.a.} = 1000 \times 5\% = 50 \text{ p.a.}$$



$$16.666$$

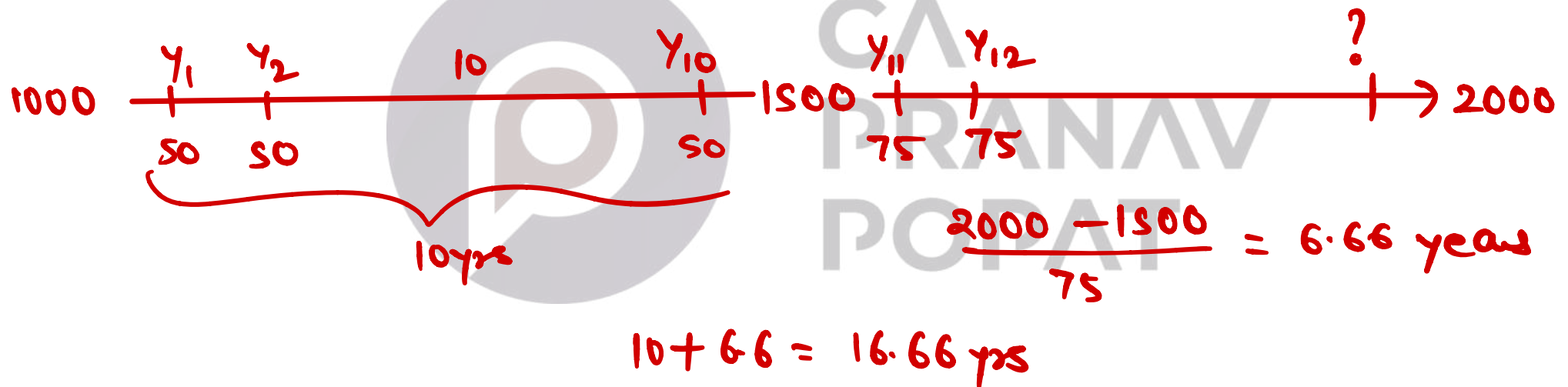
$$\frac{500}{75} = 6.66$$

$$2000 - 1500 = 500$$

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



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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a. ✓ $P = \frac{41Q}{80}$

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

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

$$\begin{aligned} \underline{\underline{X}} & & \underline{\underline{Y}} \\ P \times 10\% \times 2 & = & Q \times [(1.05)^2 - 1] \\ 0.2P & = & 0.1025Q \end{aligned}$$

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

$$\begin{aligned} P & = 0.5125 \times Q \\ & = \frac{41}{80} \end{aligned}$$