ప్రకాశం | సేశ్మవారం | **ಜಾ**ତ୍ର | 8 | 2019



Which year was the gross Turnover..



Directions (Q. No. 1–5) : What						
approximate answer should come in						
place the question mark (?) in the						
following questions? (You are not						
exp	vected to	calculate	the exact			
val	ue).					
1.	14959.989	÷ 15.012	+ 13730 ÷			
	98 = ?					
	a) 1140	b) 1236.63	3 c) 1040			
	d) 990	e) 1000				
2.	134.786%	of 479.998	8 + ?% of			
	322.011 =	727.5				
	a) 15	b) 35	c) 30			
	d) 25	e) 20				
3.	2377.632 -	-18.05 - 4.	.96 × 8.001			
	= ?					
	a) 92	b) 106	c) 88			
	d) 96	e) 110				
4.	61.884 × 1	$12.91 \times 16.$	502 = ?			
	a) 13184	b) 139	992			
	c) 13400	d) 120)78			
	e) 13299					

	5.	8.13 ³	+	83	+	8.91 ²	+ ($(64.021)^{\frac{1}{2}}$
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N. Vinaykumar Reddy	questions given below:	a) Depreciation		c) 18 km d) 15 km
Director IACE	Financial Statement of A	b) Profit before int. and dep.		e) None of these
Director, IACL,	Company Over The Years	c) Net profit		15. A person invested sum of the
nyuerabau.	Year Gross Profit before In	terest Rs. Depreciation Net profit Rs.	DOs Clarks	amount at the rate of 15% SI per
11/11/15-11/11/19/A	Turn over interest and	Rs.	PUS, CIEIRS	annum for two years and
MODEL OLIEGTIONS	Rs. depreciation Rs.		Quantitative Aptitude	received total amount of Rs
MODEL QUESTIONS	1980-81 1380.00 380.92 1981 82 1401 00 404 98	<u>300.25 69.90 10.67</u> 215.40 71.12 18.46	Snecial	19500. He invested same sum a the rote $r^{0/2}$ per enpur
Directions (O No 1-5) · What	1981-82 1401.00 404.98 1982-83 1540.00 520.03	313.40 71.12 18.40 390.85 80.02 49.16	Also useful for	compounded appually for two
annrovimate answer should come in	1983-84 2112.00 599.01	444.44 88.88 65.69	Other Competitive Exams	vears and he received interest Rs
place the auestion mark (?) in the	1984-85 2520.00 811.00	505.42 91.91 212.78		2100 more as compared to the
following questions? (You are not	1985-86 2758.99 920.00	600.20 99.00 220.80		simple interest, then find the
expected to calculate the exact	(Rupees in Lakhs)	d) Gross Interest	a) 20% b) 24% c) 25%	value of 'x'
value).	6. During which year did the 'Net	e) None of these	d) 28% e) 36%	a) 10% b) 15% c) 12%
1. $14959.989 \div 15.012 + 13730 \div$	Profit' exceed Rs. 1 crore for the	10. The 'Gross Turnover' for 1982 –	13. An officer's pension on retirem-	d) 20% e) 24%
98 = ?	first time?	83 is about what per cent of the	ent from service is equal to half	Directions (Q. No. 16–20) : In
a) 1140 b) 1236.63 c) 1040	a) 1983–84 b) 1984–85	'Gross Turnover' for 1984 – 85?	the average salary during last 36	each of these questions, two
d) 990 e) 1000	c) 1985–86 d) 1980–81	(approximately)	months of his service. His salary	equations numbered I and II are
2. 134.786% of 479.998 + ?% of	e) 1981–82	a) 60 b) 70 c) 50	from 1 January, 2014 is Rs. 3800	given. You have to solve both the
322.011 = 727.5	7. During which year was the 'gross	d) 40 e) 30	per month with increment of Rs.	equation and give answer
a) 15 b) 35 c) 30 d) 25 c) 20	I urnover' closest to the thrice the	11. Ram and Ravi can separately do	400 on 1 October 2014, October 2016	a) If $x > y$ b) If $x < y$ a) If $x > y$ d) If $x < y$
$\begin{array}{c} (1) \ 25 \\ (2) \ 20 \\ (3) \ 2377 \ 632 \\ (3) \ 18 \ 05 \\ (4) \ 06 \\ (3) \ 8 \ 001 \\ (3) \ 18 \ 05 \\ (4) \ 6 \\ (3) \ 8 \ 001 \\ (3) \ 18 \ 05 \\ (4) \ 18 \ 05 \ 05 \\ (4) \ 18 \ 05 \ 05 \ 05 \ 05 \ 05 \ 05 \ 05 \ 0$	depreciation ²	a piece of work in 20 and 15 days	2015 and 1 October, 2016. If he retires on 1 January 2017 what	c) If $x \ge y$ d) If $x \ge y$ a) If $x = y$ or relation cannot be
5. $2377.032 \div 10.03 = 4.90 \times 0.001$ = 2	a) 1080-81 b) $1081-82$	ther for 6 days after which Ravi	pension does he draw?	x = y of relation calified
(a) 92 b) 106 c) 88	c) 1983–84 d) 1985–86	was replaced by Rohit If the	a) Rs 2100 b) Rs 2150	16. I $5x^2 - 18x + 9 = 0$
d) 96 e) 110	e) 1984–85	work was finished in next 4	c) Rs. 2200 d) Rs. 2250	$II. 3v^2 + 5v - 2 = 0$
4. $61.884 \times 12.91 \times 16.502 = ?$	8. During which of the given years	days, then the number of days in	e) Rs. 2300	$17 I \int \sqrt{6} 0$
a) 13184 b) 13992	did the 'Net Profit' form the high-	which Rohit alone could do the	14. Kannan covers the distance from	$17.1. \sqrt{x} - \frac{1}{\sqrt{x}} = 0$
c) 13400 d) 12078	est proportion of the 'Profit	work will be?	his home to his office by bike. He	$\frac{3}{11}$ $\frac{3}{2}$ $\frac{3}{2}$
e) 13299	before Interest and Depreciation'?	a) 40 b) 42 c) 45	travelled at a speed of 15 kmph;	11. $y^3 - 6^2 = 0$
5. $8.13^3 + 8^3 + 8.91^2 + (64.021)^{\frac{1}{2}}$	a) 1984–85 b) 1985–86	d) 50 e) None of these	he reached the office late by 40	18. I. $(625)^{1/4}x + \sqrt{1225} = 155$
= ?	c) 1980–81 d) 1982–83	12. The marked price of an electric	minutes. So he increased the	100 10 070
a) 5184 b) 1095 c) 1171	e) 1983–84	iron is Rs. 690. The shopkeeper	speed by 3 kmph, he reached the	II. $\sqrt{196y + 13} = 279$
d) 1113 e) 1761	9. Which of the following	allows a discount of 10% and	office late by 30 minutes. Find	19. 1. $3x^2 - 17x + 24 = 0$
Dimentiona (O. No. 6, 10) . Study	registered the lowest increase in	gains 8%. If no discount is	the distance between the nouse	$11. 4y^2 - 15y + 14 = 0$
the table carefully and answer the	108/1-85 to the year $1085 - 862$	be	and first office? a) 20 km b) 21 km	20. 1. $x^2 - 2x - \sqrt{3x} + 2\sqrt{3} = 0$ II. $x^2 - \sqrt{3x} - \sqrt{2x} + \sqrt{6} = 0$
the tuble carejulty and answer the	1904-05 to the year $1905-00$?		$a) 20 \text{ Km} \qquad b) 21 \text{ Km}$	$11. y = \sqrt{3}y = \sqrt{2}y + \sqrt{0} = 0$
Colutions	8. We look at the 'Net profit' and	$(^{3}/_{10})$ × (Ram + Rohit)'s whole	[: he retired on 1^{st} Jan. 2017]	$\Rightarrow 5x^2 - 15x - 3x + 9 = 0$
Solutions	8. We look at the 'Net profit' and 'Profits before Interest and	$(^{3}/_{10})$ ×(Ram + Rohit)'s whole work = 4 (Ram + Rohit)'s	[∴ he retired on 1 st Jan, 2017] i.e. 3 months	$\Rightarrow 5x^2 - 15x - 3x + 9 = 0$ $\Rightarrow (5x - 3)(x - 3) = 0$
Solutions 1. 14959.989 ÷ 15.012 +13730 ÷	8. We look at the 'Net profit' and 'Profits before Interest and Depreciation'. We need to find	$({}^{3}/{}_{10})$ ×(Ram + Rohit)'s whole work = 4 (Ram + Rohit)'s whole work = ${}^{40}/{}_{3}$	[: he retired on 1^{st} Jan, 2017] i.e. 3 months = $3 \times (3800 + 1200) = 15000$	$\Rightarrow 5x^2 - 15x - 3x + 9 = 0$ $\Rightarrow (5x - 3)(x - 3) = 0$ $\Rightarrow x = \frac{3}{5} \text{ or } x = 3$
Solutions 1. 14959.989 ÷ 15.012 +13730 ÷ 98 = ?	8. We look at the 'Net profit' and 'Profits before Interest and Depreciation'. We need to find the year in which 'profits	$({}^{3}/{}_{10})$ ×(Ram + Rohit)'s whole work = 4 (Ram + Rohit)'s whole work = ${}^{40}/{}_{3}$ Rohit's one day work	[: he retired on 1^{st} Jan, 2017] i.e. 3 months = $3 \times (3800 + 1200) = 15000$ \therefore Officer's pension	$\Rightarrow 5x^{2} - 15x - 3x + 9 = 0$ $\Rightarrow (5x - 3)(x - 3) = 0$ $\Rightarrow x = \frac{3}{5} \text{ or } x = 3$ $3y^{2} + 5y - 2 = 0$
Solutions 1. 14959.989 ÷ 15.012 +13730 ÷ 98 = ? $=\frac{15000}{+}+\frac{13730}{-}$	8. We look at the 'Net profit' and 'Profits before Interest and Depreciation'. We need to find the year in which 'profits before' is the smallest	$({}^{3}/{}_{10})$ ×(Ram + Rohit)'s whole work = 4 (Ram + Rohit)'s whole work = ${}^{40}/{}_{3}$ Rohit's one day work = $\underline{3} - \underline{1} = \underline{1}$	[:: he retired on 1 st Jan, 2017] i.e. 3 months = $3 \times (3800 + 1200) = 15000$:: Officer's pension = $\frac{1}{2} \left[\frac{34200 + 50400 + 55200 + 15000}{24} \right]$	$\Rightarrow 5x^{2} - 15x - 3x + 9 = 0$ $\Rightarrow (5x - 3)(x - 3) = 0$ $\Rightarrow x = \frac{3}{5} \text{ or } x = 3$ $3y^{2} + 5y - 2 = 0$ $\Rightarrow 3y^{2} + 6y - y - 2 = 0$
Solutions 1. 14959.989 ÷ 15.012 +13730 ÷ 98 = ? $=\frac{15000}{15} + \frac{13730}{98}$	8. We look at the 'Net profit' and 'Profits before Interest and Depreciation'. We need to find the year in which 'profits before' is the smallest multiple of 'Net Profits'. Use	$({}^{3}/{}_{10}) \times (\text{Ram} + \text{Rohit})$'s whole work = 4 (Ram + Rohit)'s whole work = ${}^{40}/{}_{3}$ Rohit's one day work $= \frac{3}{40} - \frac{1}{20} = \frac{1}{40}$	[:: he retired on 1 st Jan, 2017] i.e. 3 months = $3 \times (3800 + 1200) = 15000$:: Officer's pension = $\frac{1}{2} \left[\frac{34200 + 50400 + 55200 + 15000}{36} \right]$	$\Rightarrow 5x^{2} - 15x - 3x + 9 = 0$ $\Rightarrow (5x - 3)(x - 3) = 0$ $\Rightarrow x = \frac{3}{5} \text{ or } x = 3$ $3y^{2} + 5y - 2 = 0$ $\Rightarrow 3y^{2} + 6y - y - 2 = 0$ $\Rightarrow (3y - 1)(y + 2) = 0$
Solutions 1. 14959.989 ÷ 15.012 +13730 ÷ 98 = ? $=\frac{15000}{15} + \frac{13730}{98}$ = 1000 + 140 = 1140 Ans:a	8. We look at the 'Net profit' and 'Profits before Interest and Depreciation'. We need to find the year in which 'profits before' is the smallest multiple of 'Net Profits'. Use approximations, $38 \div 1$, $40 \div 2$,	$({}^{3}/{}_{10}) \times (\text{Ram} + \text{Rohit})$'s whole work = 4 (Ram + Rohit)'s whole work = ${}^{40}/{}_{3}$ Rohit's one day work $= \frac{3}{40} - \frac{1}{20} = \frac{1}{40}$ Rohit alone can complete the	[:: he retired on 1 st Jan, 2017] i.e. 3 months = $3 \times (3800 + 1200) = 15000$:: Officer's pension $= \frac{1}{2} \left[\frac{34200 + 50400 + 55200 + 15000}{36} \right]$ = 2150 Ans:b	$\Rightarrow 5x^{2} - 15x - 3x + 9 = 0$ $\Rightarrow (5x - 3)(x - 3) = 0$ $\Rightarrow x = \frac{3}{5} \text{ or } x = 3$ $3y^{2} + 5y - 2 = 0$ $\Rightarrow 3y^{2} + 6y - y - 2 = 0$ $\Rightarrow (3y - 1)(y + 2) = 0$ $\Rightarrow y = \frac{1}{3} \text{ or } -2$ Ans:a
Solutions 1. 14959.989 ÷ 15.012 +13730 ÷ 98 = ? $=\frac{15000}{15} + \frac{13730}{98}$ = 1000 + 140 = 1140 Ans:a 2. 134.786% of 479.998 + x% of 222.011 = 727.5	8. We look at the 'Net profit' and 'Profits before Interest and Depreciation'. We need to find the year in which 'profits before' is the smallest multiple of 'Net Profits'. Use approximations, $38 \div 1$, $40 \div 2$, $52 \div 5$, $60 \div 6.5$, $80 \div 20$, $92 \div 22$	$({}^{3}/{}_{10}) \times (\text{Ram} + \text{Rohit})$'s whole work = 4 (Ram + Rohit)'s whole work = ${}^{40}/{}_{3}$ Rohit's one day work $= \frac{3}{40} - \frac{1}{20} = \frac{1}{40}$ Rohit alone can complete the work in 40 days <i>Ans:a</i>	[:. he retired on 1 st Jan, 2017] i.e. 3 months = $3 \times (3800 + 1200) = 15000$ \therefore Officer's pension $= \frac{1}{2} \left[\frac{34200 + 50400 + 55200 + 15000}{36} \right]$ = 2150 Ans:b 14. Let distance between house to affice 'v'	$\Rightarrow 5x^{2} - 15x - 3x + 9 = 0$ $\Rightarrow (5x - 3)(x - 3) = 0$ $\Rightarrow x = \frac{3}{5} \text{ or } x = 3$ $3y^{2} + 5y - 2 = 0$ $\Rightarrow 3y^{2} + 6y - y - 2 = 0$ $\Rightarrow (3y - 1)(y + 2) = 0$ $\Rightarrow y = \frac{1}{3} \text{ or } -2$ Ans:a 17. $\sqrt{x} - \sqrt{6} / \sqrt{x} = 0$
Solutions 1. 14959.989 ÷ 15.012 +13730 ÷ 98 = ? $=\frac{15000}{15} + \frac{13730}{98}$ = 1000 + 140 = 1140 Ans:a 2. 134.786% of 479.998 + x% of 322.011 = 727.5 135 x	8. We look at the 'Net profit' and 'Profits before Interest and Depreciation'. We need to find the year in which 'profits before' is the smallest multiple of 'Net Profits'. Use approximations, $38 \div 1$, $40 \div 2$, $52 \div 5$, $60 \div 6.5$, $80 \div 20$, $92 \div 22$ and make quick mental calculation. Obviously any one	$({}^{3}/{}_{10}) \times (\text{Ram} + \text{Rohit})$'s whole work = 4 (Ram + Rohit)'s whole work = ${}^{40}/{}_{3}$ Rohit's one day work $= \frac{3}{40} - \frac{1}{20} = \frac{1}{40}$ Rohit alone can complete the work in 40 days <i>Ans:a</i> 12. Marked price = Rs. 690 \therefore Discount = 10%	[:. he retired on 1 st Jan, 2017] i.e. 3 months = $3 \times (3800 + 1200) = 15000$ \therefore Officer's pension $= \frac{1}{2} \begin{bmatrix} 34200 + 50400 + 55200 + 15000 \\ 36 \end{bmatrix}$ = 2150 Ans:b 14. Let distance between house to office 'x' From Question	$\Rightarrow 5x^{2} - 15x - 3x + 9 = 0$ $\Rightarrow (5x - 3)(x - 3) = 0$ $\Rightarrow x = \frac{3}{5} \text{ or } x = 3$ $3y^{2} + 5y - 2 = 0$ $\Rightarrow 3y^{2} + 6y - y - 2 = 0$ $\Rightarrow (3y - 1)(y + 2) = 0$ $\Rightarrow y = \frac{1}{3} \text{ or } -2$ Ans:a 17. $\sqrt{x} - \sqrt{6} / \sqrt{x} = 0$ $x - \sqrt{6} = 0 \Rightarrow x = \sqrt{6}$ $y^{3} - 6(\frac{3}{2}) = 0$
Solutions 1. $14959.989 \div 15.012 + 13730 \div$ 98 = ? $= \frac{15000}{15} + \frac{13730}{98}$ = 1000 + 140 = 1140 Ans:a 2. 134.786% of $479.998 + x\%$ of $322.011 = 727.5$ $\frac{135}{100} 480 + \frac{x}{100} 320 = 728$	8. We look at the 'Net profit' and 'Profits before Interest and Depreciation'. We need to find the year in which 'profits before' is the smallest multiple of 'Net Profits'. Use approximations, $38 \div 1$, $40 \div 2$, $52 \div 5$, $60 \div 6.5$, $80 \div 20$, $92 \div 22$ and make quick mental calculation. Obviously any one of the last two is the answer We	$({}^{3}/{}_{10})$ ×(Ram + Rohit)'s whole work = 4 (Ram + Rohit)'s whole work = ${}^{40}/{}_{3}$ Rohit's one day work $=\frac{3}{40}-\frac{1}{20}=\frac{1}{40}$ Rohit alone can complete the work in 40 days <i>Ans:a</i> 12. Marked price = Rs. 690 ∴ Discount = 10% 690, 90	[:. he retired on 1 st Jan, 2017] i.e. 3 months = $3 \times (3800 + 1200) = 15000$ \therefore Officer's pension $= \frac{1}{2} \left[\frac{34200 + 50400 + 55200 + 15000}{36} \right]$ = 2150 Ans:b 14. Let distance between house to office 'x' From Question, x 40 x 30	$\Rightarrow 5x^{2} - 15x - 3x + 9 = 0$ $\Rightarrow (5x - 3)(x - 3) = 0$ $\Rightarrow x = \frac{3}{5} \text{ or } x = 3$ $3y^{2} + 5y - 2 = 0$ $\Rightarrow 3y^{2} + 6y - y - 2 = 0$ $\Rightarrow (3y - 1)(y + 2) = 0$ $\Rightarrow y = \frac{1}{3} \text{ or } -2$ Ans:a 17. $\sqrt{x} - \sqrt{6} / \sqrt{x} = 0$ $x - \sqrt{6} = 0 \Rightarrow x = \sqrt{6}$ $y^{3} - 6(\frac{3}{2}) = 0$ $\Rightarrow y^{3} = (\sqrt{6})^{3} \Rightarrow y = \sqrt{6}$ Ans:e
Solutions 1. 14959.989 ÷ 15.012 +13730 ÷ 98 = ? $=\frac{15000}{15} + \frac{13730}{98}$ = 1000 + 140 = 1140 Ans:a 2. 134.786% of 479.998 + x% of 322.011 = 727.5 $\frac{135}{100}$ 480 + $\frac{x}{100}$ 320 = 728 (40 + $\frac{x}{100}$ 220 720	8. We look at the 'Net profit' and 'Profits before Interest and Depreciation'. We need to find the year in which 'profits before' is the smallest multiple of 'Net Profits'. Use approximations, $38 \div 1$, $40 \div 2$, $52 \div 5$, $60 \div 6.5$, $80 \div 20$, $92 \div 22$ and make quick mental calculation. Obviously any one of the last two is the answer. We have $80 \div 20=4$, $92 \div 22 >4$, and	$({}^{3}/{}_{10})$ ×(Ram + Rohit)'s whole work = 4 (Ram + Rohit)'s whole work = ${}^{40}/{}_{3}$ Rohit's one day work $= \frac{3}{40} - \frac{1}{20} = \frac{1}{40}$ Rohit alone can complete the work in 40 days Ans:a 12. Marked price = Rs. 690 ∴ Discount = 10% SP = $\frac{690 \ 90}{100}$ = Rs.621	[:. he retired on 1 st Jan, 2017] i.e. 3 months = $3 \times (3800 + 1200) = 15000$:. Officer's pension $= \frac{1}{2} \left[\frac{34200 + 50400 + 55200 + 15000}{36} \right]$ = 2150 Ans:b 14. Let distance between house to office 'x' From Question, $\frac{x}{15} - \frac{40}{60} = \frac{x}{18} - \frac{30}{60}$	$\Rightarrow 5x^{2} - 15x - 3x + 9 = 0$ $\Rightarrow (5x - 3)(x - 3) = 0$ $\Rightarrow x = \frac{3}{5} \text{ or } x = 3$ $3y^{2} + 5y - 2 = 0$ $\Rightarrow 3y^{2} + 6y - y - 2 = 0$ $\Rightarrow (3y - 1)(y + 2) = 0$ $\Rightarrow y = \frac{1}{3} \text{ or } -2$ Ans:a 17. $\sqrt{x} - \sqrt{6} / \sqrt{x} = 0$ $x - \sqrt{6} = 0 \Rightarrow x = \sqrt{6}$ $y^{3} - 6(\frac{3}{2}) = 0$ $\Rightarrow y^{3} = (\sqrt{6})^{3} \Rightarrow y = \sqrt{6}$ Ans:e 18. $5x + 35 = 155$
Solutions 1. 14959.989 ÷ 15.012 +13730 ÷ 98 = ? $=\frac{15000}{15} + \frac{13730}{98}$ = 1000 + 140 = 1140 Ans:a 2. 134.786% of 479.998 + x% of 322.011 = 727.5 $\frac{135}{100}$ 480 + $\frac{x}{100}$ 320 = 728 $648 + \frac{x}{100}$ 320 = 728	8. We look at the 'Net profit' and 'Profits before Interest and Depreciation'. We need to find the year in which 'profits before' is the smallest multiple of 'Net Profits'. Use approximations, 38 ÷ 1, 40 ÷ 2, 52 ÷ 5, 60 ÷ 6.5, 80 ÷20, 92 ÷ 22 and make quick mental calculation. Obviously any one of the last two is the answer. We have 80 ÷ 20=4, 92 ÷ 22 >4, and hence 80 ÷ 20 is the minimum.	$({}^{3}/_{10}) \times (\text{Ram} + \text{Rohit}) \text{'s whole}$ work = 4 (Ram + Rohit)'s whole work = ${}^{40}/_{3}$ Rohit's one day work $= \frac{3}{40} - \frac{1}{20} = \frac{1}{40}$ Rohit alone can complete the work in 40 days Ans:a 12. Marked price = Rs. 690 ∴ Discount = 10% SP = $\frac{690 \ 90}{100} = \text{Rs.621}$ Profit = 8%	[:. he retired on 1 st Jan, 2017] i.e. 3 months = $3 \times (3800 + 1200) = 15000$:. Officer's pension $= \frac{1}{2} \left[\frac{34200 + 50400 + 55200 + 15000}{36} \right]$ = 2150 Ans:b 14. Let distance between house to office 'x' From Question, $\frac{x}{15} - \frac{40}{60} = \frac{x}{18} - \frac{30}{60}$ x = x + 2 = 1	$\Rightarrow 5x^{2} - 15x - 3x + 9 = 0$ $\Rightarrow (5x - 3)(x - 3) = 0$ $\Rightarrow x = \frac{3}{5} \text{ or } x = 3$ $3y^{2} + 5y - 2 = 0$ $\Rightarrow 3y^{2} + 6y - y - 2 = 0$ $\Rightarrow (3y - 1)(y + 2) = 0$ $\Rightarrow y = \frac{1}{3} \text{ or } -2$ Ans:a 17. $\sqrt{x} - \sqrt{6} / \sqrt{x} = 0$ $x - \sqrt{6} = 0 \Rightarrow x = \sqrt{6}$ $y^{3} - 6(\frac{3}{2}) = 0$ $\Rightarrow y^{3} = (\sqrt{6})^{3} \Rightarrow y = \sqrt{6}$ Ans:e 18. $5x + 35 = 155$ $\Rightarrow 5x = 155 - 35$
Solutions 1. 14959.989 ÷ 15.012 +13730 ÷ 98 = ? $= \frac{15000}{15} + \frac{13730}{98}$ = 1000 + 140 = 1140 Ans:a 2. 134.786% of 479.998 + x% of 322.011 = 727.5 $\frac{135}{100}$ 480 + $\frac{x}{100}$ 320 = 728 $648 + \frac{x}{100}$ 320 = 728 $\frac{x}{100}$ 320 = 728	8. We look at the 'Net profit' and 'Profits before Interest and Depreciation'. We need to find the year in which 'profits before' is the smallest multiple of 'Net Profits'. Use approximations, $38 \div 1$, $40 \div 2$, $52 \div 5$, $60 \div 6.5$, $80 \div 20$, $92 \div 22$ and make quick mental calculation. Obviously any one of the last two is the answer. We have $80 \div 20=4$, $92 \div 22 >4$, and hence $80 \div 20$ is the minimum. Hence, $1984 - 85$ is the answer.	$({}^{3}/_{10}) \times (\text{Ram} + \text{Rohit})'\text{s} \text{ whole}$ work = 4 (Ram + Rohit)'s whole work = ${}^{40}/_{3}$ Rohit's one day work = $\frac{3}{40} - \frac{1}{20} = \frac{1}{40}$ Rohit alone can complete the work in 40 days <i>Ans:a</i> 12. Marked price = Rs. 690 \therefore Discount = 10% $\text{SP} = \frac{690 \ 90}{100} = \text{Rs.621}$ Profit = 8% $\therefore \text{CP} = \frac{621}{100} = \text{Ps.575}$	[: he retired on 1 st Jan, 2017] i.e. 3 months = $3 \times (3800 + 1200) = 15000$: Officer's pension $= \frac{1}{2} \left[\frac{34200 + 50400 + 55200 + 15000}{36} \right]$ = 2150 Ans:b 14. Let distance between house to office 'x' From Question, $\frac{x}{15} - \frac{40}{60} = \frac{x}{18} - \frac{30}{60}$ $\frac{x}{15} - \frac{x}{18} = \frac{2}{3} - \frac{1}{2}$	$\Rightarrow 5x^{2} - 15x - 3x + 9 = 0$ $\Rightarrow (5x - 3)(x - 3) = 0$ $\Rightarrow x = \frac{3}{5} \text{ or } x = 3$ $3y^{2} + 5y - 2 = 0$ $\Rightarrow 3y^{2} + 6y - y - 2 = 0$ $\Rightarrow (3y - 1)(y + 2) = 0$ $\Rightarrow y = \frac{1}{3} \text{ or } -2$ Ans:a 17. $\sqrt{x} - \sqrt{6} / \sqrt{x} = 0$ $x - \sqrt{6} = 0 \Rightarrow x = \sqrt{6}$ $y^{3} - 6(\frac{3}{2}) = 0$ $\Rightarrow y^{3} = (\sqrt{6})^{3} \Rightarrow y = \sqrt{6}$ Ans:e 18. $5x + 35 = 155$ $\Rightarrow 5x = 155 - 35$ $\Rightarrow x = 120/5 = 24$
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-	0		
	a) If $x > y$	b) If $x < y$	
	c) If $x \ge y$	d) If $x \le y$	
	e) If $x = y$ or r	relation cannot	be
	established		
6.	I. $5x^2 - 18x + 9$	0=0	
	II. $3y^2 + 5y - 2$	c = 0	
7.	I. $\sqrt{x} - \frac{\sqrt{6}}{\sqrt{x}} = 0$		
	$\frac{3}{3}$		
	II. $y^3 - 6^2 = 0$		
8.	I. $(625)^{1/4}x + \sqrt{1}$	$\overline{225} = 155$	