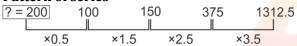
## SBI Clerk Prelims 2020 - Quantitative Aptitude (Solutions)

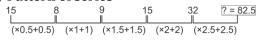
- **36.** (d); Required average =  $\frac{450+420+450}{3}$  = 440
- **37.** (a); Total male participated from school B & D together = 540 + 560 = 1100Total female participated from school A & C together = 450 + 500 = 950Required difference = 1100 950 = 150
- **38.** (d); Total male participated from school B & C together = 540 + 720 = 1260Total female participated from school A & D together = 450 + 450 = 900Required % =  $\frac{1260 900}{900} \times 100 = 40\%$
- **39.** (b); Total students participated from school F =  $\frac{140}{100} \times 650 + 420 \times \frac{32}{21}$  = 910 + 640 = 1550
- **40.** (b); Total number of male students participated from all the five schools = (650 + 540 + 720 + 560 + 680) = 3150



42. (a); Pattern of series -



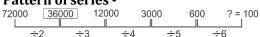
43. (d); Pattern of series



44. (e); Pattern of series -



45. (e); Pattern of series



- **46.** (d); let total work be 360 units

  Efficiency of 1 man =  $\frac{360}{12 \times 10}$  = 3 units/day

  Efficiency of 1 woman =  $\frac{360}{10 \times 18}$  = 2 units/day

  Required time =  $\frac{360}{4 \times 3 + 6 \times 2}$  = 15 days
- **47.** (a); distance = 240 kms Required speed =  $\frac{240}{2.5}$  = 96 kmph Required % =  $\frac{96-60}{60}$  × 100 = 60%

**48. (b)**; Let 10 years ago, ages of Ram and Rahim were x years and 3x years, respectively.

Then, present age of Ram = (x + 10)and present age of Rahim = (3x + 10)

According to the question,

$$\frac{x+10+5}{3x+10+5} = \frac{2}{3}$$

$$\Rightarrow 3x + 45 = 6x + 30$$

$$\Rightarrow 3x = 15$$

$$\therefore x = 5$$
Hence, required ratio =  $\frac{5+10}{3\times 5+10}$ 
=  $\frac{15}{25} = 3:5$ 

- **49. (b)**; required time =  $\frac{140+120}{(132-80)\times\frac{5}{18}}$ =  $\frac{260\times18}{52\times5}$  = 18 sec
- **50.** (c); let CP of book be Rs x SP = Rs 1.2x New CP = Rs 0.9x New SP = Rs 1.2x + 90 ATQ,  $0.9x \times \frac{140}{100} = 1.2x + 90$ 1.26x = 1.2x + 90 x = Rs 1500
- **51.** (a); I. x = 5 II. y = 5 So, x=y
- 52. (d); I.  $x^2 + 7x 5x 35 = 0$  x(x+7) - 5(x+7) = 0 (x+7)(x-5) = 0 x = -7, 5II.  $y^2 + 7y + 8y + 56 = 0$  y(y+7) + 8(y+7) = 0 (y+7)(y+8) = 0 y = -8, -7So,  $x \ge y$
- **53.** (a) I.  $x = \pm 9$ II.  $y = \pm 8$ So, no relation can be established
- **54.** (a); I.  $17x^2 14x 3 = 0$   $17x^2 - 17x + 3x - 3 = 0$  17x (x - 1) + 3(x - 1) = 0 (17x + 3) (x - 1) = 0  $x = -\frac{3}{17}$ , 1 II.  $y^2 - 2y - 35 = 0$   $y^2 - 7y + 5y - 35 = 0$  y(y - 7) + 5(y - 7) = 0 y = 7, -5So, no relation can be established

55. (e); I. 
$$x^2 + 9x - 5x - 45 = 0$$
  
 $x(x+9) - 5(x+9) = 0$   
 $(x-5)(x+9) = 0$   
 $x = 5, -9$   
II.  $y^2 - 5y - 8y + 40 = 0$   
 $y(y-5) - 8(y-5) = 0$   
 $(y-5)(y-8) = 0$   
 $y = 5, 8$ 

So, x≤v

**57.** (a); let rate of interest be R%

2

- **56. (e);** let initial quantity of milk & water be 5x & 3x lit respectively  $ATQ, \frac{5x+8}{3x} = \frac{11}{5}$   $25x + 40 = 33x \Rightarrow x = 5$ required difference = 5x 3x = 2x = 10 lit
- ATQ,  $1200 = \frac{6000 \times R \times 2}{100}$ R = 10% Since compounding is done half-yearly, rate of interest = 5% Effective rate of interest =  $5 + 5 + \frac{5 \times 5}{100} = 10.25\%$ Required interest =  $\frac{6000 \times 10.25 \times 1}{100} = \text{Rs } 615$
- **58. (b);** let speed of boat in still water & speed of stream be 7x & 3x kmph respectively  $ATQ, \frac{28}{7x+3x} = \frac{42}{60}$  x = 4Required difference =  $\frac{40}{7x-3x} \frac{60}{7x+3x} = \frac{4}{x} = 1$  hour
- 59. (d); let amount invested by A be Rs x

  Profit ratio; A: B =  $(x \times 12)$ :  $(17000 x) \times 6 + (15500 x) \times 6$ = 2x: (32500 2x)ATQ,  $\frac{19500}{32500 2x + 2x} \times (32500 2x) = 8100$  32500 2x = 13500 x = Rs 9500Required capital of B after 6 months

  = 15500 x = Rs 6000

- 60. (c); let length & breadth of rectangle be x & y m respectively
  ATQ, 1.4xy xy = 24
  xy = 60 ......(i)
  also, 2(x + y) = 32
  x + y = 16 .....(ii)
  from (i) & (ii)
  x = 10 m, y = 6 m
  breadth of rectangle = 6 m
- **61. (d);** ? = 170 35 ? = 135
- **62.** (a);  $(12 + 13) \times 3 = \frac{?}{5}$  ? = 375
- **63.** (c);  $? = (3 \times 5) \times 8$ ? = 120
- **64. (b)**;  $\left(\frac{120}{100} \times 750\right) \div ? = 25$   $? = 900 \div 25$ ? = 36
- **65.** (d);  $? = (8 4 + 3) + \frac{6 10 + 7}{12}$  $? = 7\frac{1}{4}$
- **66.** (e);  $275 + \frac{64}{100} \times 750 = 750 + ?$  275 + 480 = 750 + ?? = 5
- **67. (a);** ? = 15 + 9 + 144 ? = 168
- **68. (c)**;  $\frac{510}{?} = 18 + 3.25$  ? = 24
- **69.** (d);  $\frac{12.5}{100} \times (120+?) = 45$  120 + ? = 360? = 240
- **70.** (c);  $44 \times 12 16 = (8)^{?}$   $528 - 16 = (8)^{?}$ ? = 3