

# 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 =  $540 + 560 = 1100$   
 Total female participated from school – A & C together =  $450 + 500 = 950$   
 Required difference =  $1100 - 950 = 150$

38. (d); Total male participated from school – B & C together =  $540 + 720 = 1260$   
 Total female participated from school – A & D together =  $450 + 450 = 900$   
 Required % =  $\frac{1260-900}{900} \times 100 = 40\%$

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 =  $(650 + 540 + 720 + 560 + 680) = 3150$

41. (b); Pattern of series -  
 $\boxed{? = 200}$     100    150    375    1312.5  
 $\times 0.5$      $\times 1.5$      $\times 2.5$      $\times 3.5$

42. (a); Pattern of series -  
 104     $\boxed{? = 112}$     96    120    88    128  
 +8    -16    +24    -32    +40

43. (d); Pattern of series -  
 15    8    9    15    32     $\boxed{? = 82.5}$   
 $(\times 0.5 + 0.5)$      $(\times 1 + 1)$      $(\times 1.5 + 1.5)$      $(\times 2 + 2)$      $(\times 2.5 + 2.5)$

44. (e); Pattern of series -  
 6    8    14    26    46     $\boxed{? = 76}$   
 +2    +6    +12    +20    +30  
 +4    +6    +8    +10

45. (e); Pattern of series -  
 72000     $\boxed{36000}$     12000    3000    600    ? = 100  
 $\div 2$      $\div 3$      $\div 4$      $\div 5$      $\div 6$

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 % =  $\frac{96-60}{60} \times 100 = 60\%$

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 =  $\frac{140+120}{(132-80) \times \frac{5}{18}}$   
 $= \frac{260 \times 18}{52 \times 5} = 18$  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,  $0.9x \times \frac{140}{100} = 1.2x + 90$   
 $1.26x = 1.2x + 90$   
 $x = \text{Rs } 1500$

51. (a); I.  $x = 5$   
 II.  $y = 5$   
 So,  $x=y$

52. (d); I.  $x^2 + 7x - 5x - 35 = 0$   
 $x(x+7) - 5(x+7) = 0$   
 $(x+7)(x-5) = 0$   
 $x = -7, 5$

II.  $y^2 + 7y + 8y + 56 = 0$   
 $y(y+7) + 8(y+7) = 0$   
 $(y+7)(y+8) = 0$   
 $y = -8, -7$   
 So,  $x \geq y$

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.  $y^2 - 2y - 35 = 0$   
 $y^2 - 7y + 5y - 35 = 0$   
 $y(y-7) + 5(y-7) = 0$   
 $y = 7, -5$   
 So, 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,  $x \leq y$

**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

**57. (a);** let rate of interest be  $R\%$   
 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,  $\frac{28}{7x+3x} = \frac{42}{60}$   
 $x = 4$   
 Required 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,  $\frac{19500}{32500 - 2x + 2x} \times (32500 - 2x) = 8100$   
 $32500 - 2x = 13500$   
 $x = \text{Rs } 9500$   
 Required capital of B after 6 months =  $15500 - x = \text{Rs } 6000$

**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);**  $(\frac{120}{100} \times 750) \div ? = 25$   
 $? = 900 \div 25$   
 $? = 36$

**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);**  $44 \times 12 - 16 = (8)^?$   
 $528 - 16 = (8)^?$   
 $? = 3$