

SOLUTIONS - SNAP 2010

| | | | | | | | | | | | | | | | | | | | |
|-----|---|-----|----|-----|---|-----|---|-----|----|-----|---|-----|----|-----|---|-----|---|-----|---|
| 1 | d | 2 | a | 3 | c | 4 | b | 5 | d | 6 | b | 7 | a | 8 | a | 9 | b | 10 | a |
| 11 | b | 12 | c | 13 | b | 14 | a | 15 | b | 16 | a | 17 | c | 18 | a | 19 | b | 20 | d |
| 21 | b | 22 | d | 23 | c | 24 | c | 25 | d | 26 | c | 27 | c | 28 | c | 29 | b | 30 | b |
| 31 | a | 32 | c | 33 | a | 34 | b | 35 | d | 36 | c | 37 | a | 38 | d | 39 | a | 40 | a |
| 41 | b | 42 | d | 43 | d | 44 | d | 45 | d | 46 | b | 47 | d | 48 | c | 49 | b | 50 | d |
| 51 | b | 52 | c | 53 | b | 54 | b | 55 | c | 56 | b | 57 | d | 58 | b | 59 | d | 60 | b |
| 61 | b | 62 | b | 63 | b | 64 | b | 65 | a | 66 | a | 67 | d | 68 | b | 69 | b | 70 | d |
| 71 | a | 72 | b | 73 | b | 74 | c | 75 | b | 76 | c | 77 | a | 78 | a | 79 | d | 80 | b |
| 81 | a | 82 | b | 83 | a | 84 | a | 85 | a | 86 | a | 87 | b | 88 | d | 89 | b | 90 | c |
| 91 | a | 92 | d | 93 | b | 94 | d | 95 | *c | 96 | b | 97 | b | 98 | a | 99 | d | 100 | b |
| 101 | a | 102 | d | 103 | d | 104 | b | 105 | a | 106 | b | 107 | *b | 108 | b | 109 | d | 110 | a |
| 111 | c | 112 | b | 113 | c | 114 | d | 115 | b | 116 | a | 117 | d | 118 | b | 119 | d | 120 | b |
| 121 | a | 122 | a | 123 | c | 124 | a | 125 | b | 126 | a | 127 | c | 128 | a | 129 | b | 130 | c |
| 131 | d | 132 | a | 133 | c | 134 | b | 135 | d | 136 | b | 137 | a | 138 | c | 139 | b | 140 | b |
| 141 | d | 142 | *c | 143 | b | 144 | c | 145 | b | 146 | d | 147 | b | 148 | b | 149 | b | 150 | d |

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1. d 2. a 3. c 4. b 5. d 56. b "Throw the baby out with the bath water" means to discard the useful along with the useless.
6. b 7. a 8. a 9. b 10. a 57. d "Bark up the wrong tree" means to make a wrong choice.
11. b 12. c 13. b 14. a 15. b 58. b Rode
16. a 17. c 18. a 19. b 20. d 59. d Prevent
21. b 22. d 23. c 24. c 25. d 60. b High
26. c 27. c 28. c 29. b 30. b 61. b Sails
31. a 32. c 33. a 34. b 35. d 62. b Further
36. c 37. a 38. d 39. a 40. a 63. b Fawn
41. b Refer to the last paragraph - "Not that the images we are able to see in literary works change." Author says that modernist writers have left an impact on literature by works that have a newer perspective on the theme.
42. d By quoting James Joyce and Virginia Woolf Author wants to emphasize on the fact that the fight for women's independence is not a new theme and that it has been going on for several decades now .
43. d Author appreciates the change that is visible in the literature with reference to the discussed theme.
44. d Author has discussed how modernist writers have impacted the issue of Women's Emancipation . None of the given options are correct.
45. d "Anthropologist" starts with a Vowel sound and hence should use "An" before it . Hence the only correct answer choice is option d.
46. b Apostrophe is used as the marking of possessive case (as in the cat's whiskers).
47. d Period is used to mark the end of declarative and imperative sentences. (Hand in the poster essays no later than noon on Friday.)
48. c Comma (I am, as you have probably noticed, very nervous about this.)
49. b Semi colon is used between closely related independent clauses not conjoined with a coordinating conjunction (I went to the basketball court; I was told it was closed for cleaning.)
50. d "Let the sleeping dogs lie" means 'Do not instigate trouble .'
51. b "A fool and his money are parted easily" means that foolish people lose wealth easily .
52. c "You are a bomb" means exceptionally wonderful.
53. b "flighty" means Indecisive and irresponsible.
54. b "Take down the enemy" means to kill/defeat the enemy.
55. c "Dime a dozen" means very common.
64. b Correct answer are discovery and altering.
65. a Correct answers are Young and face lift.
66. a Correct answer is empty.
67. d Correct answer is learning.
68. b Eulogize means to praise highly. Opposite will be to Criticize.
69. b Pedantic means ostentatious in one's learning.
70. d Pyrophobia is the fear of fire.
71. a Masculine has "man".
72. b Respite has "rest".
73. b Weight can be clubbed with both paper (Paper-weight) and lifter (weight -lifter).
74. c "out" can be clubbed with all the words except "bug". 'Out-shine', 'out Number' and 'out'.
75. b News can be clubbed with all the words except Week. 'News letter', 'newsstand', 'newspaper'.
76. c Correct answer should be at the party.
77. a Correct expression is Cool as a Cucumber which means very calm.
78. a Correct expression is as fresh as a daisy which means very fresh.
79. d All the rest denote a couple.
80. b Nerd means an uninteresting person.
81. a Total revenue for 30 days = $10,000 \times 30 = \text{Rs.}3,00,000$
 Total revenue for weekends = $20,000 \times 8 = \text{Rs.}1,60,000$
 Total revenue for weekdays = $3,00,000 - 1,60,000 = \text{Rs.}1,40,000$
 Hence, average daily revenue for weekdays

$$= \frac{1,40,000}{22} \approx \text{Rs.}6,364.$$

82. b As both the prime numbers are greater than 2, so both must be odd. Sum of any two odd numbers must be even. Hence, $X + Y \neq 87$.
83. a Let total units to be filled be 24.
Units filled by A in one hour = 4
Units filled by B in one hour = 3
Units filled by A, B and C in one hour = 12
So, units filled by C in one hour = 5
Hence, C can fill the complete tank in $\frac{24}{5} = 4.8$ hours.
84. a Let total units to be filled be 6.
Units filled by A in one hour = 2
Units filled by B in one hour = 1
Units filled in the swimming pool upto 10:00 a.m. = 2
Units filled in the swimming pool upto 11:00 a.m. = 2 + 3 = 5
Now as 3 units are being filled in one hour,
So 1 unit will be filled in $\frac{1}{3}$ hr i.e. 20 minutes
Hence, swimming pool will be completely filled at 11 : 20 a.m.
85. a Prime numbers between 60 and 70 are 61 and 67.
 \therefore Required sum = 61 + 67 = 128.
86. a It is an A.P. in second form.
The difference between the terms is in A.P.
So the missing term is 42 + 14 = 56
87. b Rolls at the time of opening = 40 dozens
Rolls sold by noon = 20 dozens
So rolls remaining = 20 dozens
Rolls sold between noon and closing time = 12 dozens
So rolls left unsold = 8 dozens.
88. d Let total units of work to be done be 60.
Now, units done by Stuart and Jack in one day = 6
units done by Jack and Leo in one day = 4
units done by Leo and Stuart in one day = 5
So units done by all three in 1 day = $\frac{6+4+5}{2} = \frac{15}{2}$
Remaining units to be done = $60 - 2 \times \frac{15}{2} = 45$
So time taken by Stuart and Jack = $\frac{45}{6} = 7.5$ days
89. b 216 : 36
90. c Let original number be y.
Now, increased number = $\frac{5}{4}y$
and decreased number = $\frac{7}{10}y$
According to question,
 $\frac{5}{4}y - \frac{7}{10}y = 22 \Rightarrow \frac{25-14}{20}y = 22 \Rightarrow \frac{11}{20}y = 22 \Rightarrow y = 40$.
91. a Bottles produced by 6 machines in one hour = 180
Bottles produced by 6 machines in 30 minutes = 90
Bottles produced by 1 machine in 30 minutes = 15
Bottles produced by 15 machines in 30 minutes = 15 × 15 = 225.
92. d Let the number be x.
Now, according to the question
 $\frac{x}{5} + 4 = \frac{x}{4} - 10 \Rightarrow \frac{x}{4} - \frac{x}{5} = 14 \Rightarrow \frac{x}{20} = 14 \Rightarrow x = 280$.
93. b $461 + 462 + 463 + 464 \equiv 1 + 2 + 3 + 4 \equiv 10 \equiv \frac{10}{10}$
 \therefore The sum will end in 0.
 \therefore The sum will be divisible by 10.
94. d From statement I, 'b' can be either negative or positive.
Also from statement II, 'b' can be either negative or positive so statements I and II cannot be combined.
Hence, we cannot find out the answer.
- 95.*c From statement I,
 $p = q + 17$ and $p = r + 103$
From statement II,
 $p + q + r = 1703$
Combining statement I and statement II,
 $p + p - 17 + p - 103 = 1703$
 $\Rightarrow 3p = 1823 \Rightarrow p = 607.67$
So value of p, q and r can be found out by combining both the statements.
*** Note: Figures are faulty as number of votes cannot be fraction but statements yield results.**
96. b From statement I, nothing can be said.
From statement II,
 $\pi(R_1^2 - R_2^2) = \frac{2}{3}\pi R_1^2$
So the ratio of $R_1 : R_2$ can be found out.
Hence, ratio of $C_1 : C_2$ can be found out.
Therefore, statement II alone is sufficient.
97. b From statement I, we can not find out the answer.
From statement II,
 $a - 3 + a - 2 + a - 1 + a + a + 1 + a + 2 + a + 3 = 105$
 $\Rightarrow 7a = 105$
 $\Rightarrow a = 15$
Hence, the middle number can be determined.
Therefore, statement II alone is sufficient.
98. a From statement I,
 $P = \frac{1}{3}(Q + R + S)$
and we know that $P + Q + R + S = 360$.
Hence, the marks of P can be determined.
Therefore, statement I alone is sufficient.
From statement II we can not say anything.
99. d Even after combining both statements the volume of container cannot be determined as width of the container is not given.
Hence, number of ice cubes that can be accommodated cannot be determined.
100. b Statement I tells only about the previous year's rate.
Statement II:
Dividend from 350 shares = Rs.1500
Dividend from 1 share = $\frac{150}{35} = \frac{30}{7} = 4.28$
So the rate of interest can be found out as
 $4.28 = \frac{10 \times R \times 1}{100}$
 $\Rightarrow R = 42.8\%$
Therefore, statement II alone is sufficient.
101. a Sales of Voveran in 2006 = Rs.23,00,00,000
Sales of Calpol in 2005 = Rs.13,00,00,000
So difference = Rs.10,00,00,000 = Rs.1,000 lakhs.

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102. d Percentage increase in sales of Voveran

$$= \frac{6.5}{16.5} \times 100 = 39.39\%$$

$$\text{Percentage increase in sales of Volini} = \frac{2}{7} \times 100 = 28.57\%$$

$$\text{Percentage increase in sales of Dolonex} = \frac{3}{7} \times 100 = 42.85\%$$

$$\text{Percentage increase in sales of Sumo} = \frac{2.5}{5} \times 100 = 50\%$$

Hence, only Sumo has a 50% increase in sales in 2005-06.

103. d Percentage increase in sales of Voveran = $\frac{6.5}{16.5} \times 100 = 39.39\%$

$$\text{Percentage increase in sales of Volini} = \frac{2.5}{7} \times 100 = 35.71\%$$

$$\text{Percentage increase in sales of Moov} = \frac{1}{4} \times 100 = 25\%$$

$$\text{Percentage increase in sales of Nise} = \frac{3}{15} \times 100 = 20\%.$$

104. b Percentage increase in the sales of Voveran

$$= \frac{6.5}{16.5} \times 100 = 39.39\% = 40\% \text{ (approx.)}$$

105. a In the first pair, the colours of the shadings gets interchanged only.

Hence, 'a' is the correct option.

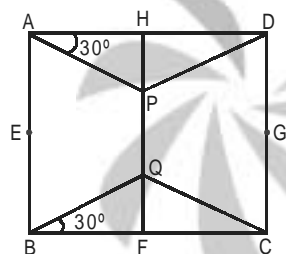
106. b $\frac{1}{10} \times 400 = 40$

$$\frac{1}{4} \times 40 = 10$$

$$\frac{1}{2} \times 10 = 5$$

Hence, the required answer is 5.

- 107.*b



Let the edge of the square measures $2a$ units.
In right triangle BFQ,

$$QF = BF \tan 30^\circ = a \tan 30^\circ = \frac{a}{\sqrt{3}}$$

Area of triangle BQC = 2(Area of triangle BFQ)

$$= 2 \left(\frac{1}{2} \right) (a) \left(\frac{a}{\sqrt{3}} \right) = \frac{a^2}{\sqrt{3}} \text{ units square}$$

Area (ABCQPD) = Area(ABFH) + 2Area (QFC)

$$= \left(\frac{1}{2} \right) \text{Area}(ABCD) + \text{Area} (BQC)$$

$$= 2a^2 + \frac{a^2}{\sqrt{3}} = a^2 \left(2 + \frac{1}{\sqrt{3}} \right)$$

Remaining area of ABCD

$$= 4a^2 - \left(2a^2 + \frac{a^2}{\sqrt{3}} \right) = a^2 \left(2 - \frac{1}{\sqrt{3}} \right)$$

$$\text{Answer} = a^2 \left(2 + \frac{1}{\sqrt{3}} \right) : a^2 \left(2 - \frac{1}{\sqrt{3}} \right)$$

$$= \frac{(2\sqrt{3} + 1)}{(2\sqrt{3} - 1)}$$

$$= \frac{(13 + 4\sqrt{3})}{11} \text{ which is none of the given options.}$$

Hence, the question is wrong.

Assumption:

Had it been polygon ABQCDP in the question instead of ABCQPD,

$$\text{answer} = \frac{4a^2 - 2(\text{area of } \triangle BQC)}{2(\text{area of } \triangle BQC)} = \frac{\left(4a^2 - \frac{2a^2}{\sqrt{3}} \right)}{\left(\frac{2a^2}{\sqrt{3}} \right)} = 2\sqrt{3} - 1$$

which is option (b).

108. b Price of Darjeeling tea on every day after 100th day = 100 + 10 = Rs.110

Price of only Tea on 100th day

$$= 85 + 0.15 \times 100 = \text{Rs.}100$$

∴ Their prices will not be same in first 100 days.

So according to the question,

$$110 = 85 + 0.15x$$

$$\Rightarrow x = \frac{25}{15} \times 100 = \frac{500}{3} = 166.67$$

i.e. on 167th day, prices will be equal.

Hence, on 16th June, prices will be equal.

109. d From statement I, we can not say that triangles must be congruent. Also from statement II, we can not say that every right angle triangles are congruent to each other. Even on combining both the statements we can not arrive at the conclusion whether the triangles are congruent or not.

110. a Let salary of A be $3x$ and that of B be $4x$ and expenditure of A be $4y$ and that of B be $5y$.

From statement I,

B's saving = x

$$\therefore 4x - 5y = x \Rightarrow 3x = 5y$$

$$\text{A's saving } 3x - 4y = 3x - \frac{3}{5}x = \frac{12}{5}x$$

Hence, ratio of saving can be determined.

Therefore, statement I alone is sufficient.

From statement II, we can not say anything about expenditures of A and B.

Therefore, statement II alone is not sufficient.

111. c Let the average height of the class be A and the number of persons in the class be N .

From statement I,

$$\frac{AN - 56}{N - 1} = A - 1 \Rightarrow AN - 56$$

$$= AN - A - N + 1 \Rightarrow A + N = 55$$

Therefore, statement I alone is not sufficient.

From statement II,

$$\frac{AN - 42}{N - 1} = A + 1 \Rightarrow AN - 42$$

$$= AN - A + N - 1 \Rightarrow A - N = 43$$

Therefore, statement II alone is not sufficient.

Combining statement I and II, we have

$$A + N = 55$$

$$A - N = 43$$

$$2A = 98 \Rightarrow A = 49$$

Hence, both statements I and II are necessary to answer.

112. b $R > S$

$$J < V$$

From statement I,

Ram is tallest but we can not know who is taller between Shyam and Vikram.

From statement II,

$$S > V$$

Hence, Jay is the shortest among them.

Therefore, statement II alone is sufficient.

113. c Let the sales in July be 150 units.

So the sales in September = 100 units

and the sales in November = 105 units

$$\text{Hence, the required percentage change} = \frac{-45}{150} \times 100\% = -30\%.$$

114. d $15x - \frac{2}{x} > 1$

$$\Rightarrow 15x - \frac{2}{x} - 1 > 0$$

$$\Rightarrow \frac{15x^2 - x - 2}{x} > 0$$

$$\Rightarrow \frac{15x^2 - 6x + 5x - 2}{x} > 0$$

$$\Rightarrow \frac{3x(5x - 2) + 1(5x - 2)}{x} > 0$$

$$\Rightarrow \frac{(3x + 1)(5x - 2)}{x} > 0 \Rightarrow \left(x + \frac{1}{3}\right)\left(x - \frac{2}{5}\right) > 0$$

$$\therefore x \in \left(-\frac{1}{3}, 0\right) \cup \left(\frac{2}{5}, \infty\right)$$

115. b

i.e. 1 : 2

So with 40 litres of a 60% alcohol solution 20 litres of a 30% alcohol solution should be added to prepare a 50% solution.

116. a Let the length of the wire be x mm.

So according to the condition,

$$\pi \left(\frac{1}{2}\right)^2 \times x = 66000 \Rightarrow \frac{22}{7} \times \frac{1}{4} \times x = 66000 \Rightarrow x = 84,000 \text{ mm}$$

So length of the wire is 84 meters.

117. d Let the speed of second train be x km/hr.

Length of both the trains = 220 m

$$\text{Now, } \frac{220}{6} = (50 + x) \times \frac{5}{18}$$

$$\Rightarrow 50 + x = 132 \Rightarrow x = 82 \text{ km/hr.}$$

118. b $(8R)^2 = 64R^2$

After dividing by 4 = $16R^2$

Its square root = $4R$

So $Q = 4R$.

119. d Let length, breadth and height of room $6x$, $4x$ and $2x$.

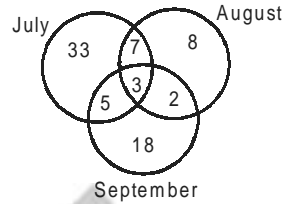
$$\text{So area of four walls} = 24x^2 + 16x^2 = 40x^2.$$

Dimensions after changes are $12x$, $2x$ and x .

$$\text{So area of four walls} = 24x^2 + 4x^2 = 28x^2.$$

$$\text{Hence, the percentage reduction in area} = \frac{12}{40} \times 100 = 30\%.$$

120. b



Hence, $7 + 2 = 9$ people read magazine for exactly two consecutive months.

121. a The final table is:

| A | B | C | D |
|----|----|----|----|
| 35 | 35 | 35 | 35 |

Prior to this stage, A gives 10% of his chocolates to C and 20% to B, i.e. A is left with 70% of last stage.

$$70\% \text{ of } x = 35 \Rightarrow x = 50$$

| A | B | C | D |
|----|----|----|----|
| 50 | 25 | 30 | 35 |

Before this stage, D gives $\frac{1}{8}$ th of his chocolates to B, i.e. D

is left with $\frac{7}{8}$ th of his chocolates at this stage.

$$\frac{7}{8}y = 35 \Rightarrow y = 40$$

Prior to this, A gave away chocolates such that B had double, C triple and D four times of its initial amount.

Hence, initial values will be

| A | B | C | D |
|-----|---------------------|---------------------|---------------------|
| 110 | $\frac{20}{2} = 10$ | $\frac{30}{3} = 10$ | $\frac{40}{4} = 10$ |

$$\therefore A = 110, B = 10, C = 10, D = 10.$$

122. a 201 is the sum of all three numbers.

So question mark should be $07 + 203 + 70 = 280$.

123. c The first letter is being incremented by two letters in each element of series, the second is being incremented by three letters and so on.

So the answer must be ZKXS.

124. a One statement of each has to be wrong and one has to be right.

So the first statement of any one of the three must be right while that of other two must be wrong.

If we assume the first statement of Sachin and Ricky to be right, we get some contradicting results.

So Brian must be top scorer and Sachin cannot be the second. Hence, correct order is Brian, Ricky, Sachin.

125. b Let the number of employees who prefer tea be T and who prefer coffee be C , while those who drink both and those who drink neither be B and N respectively.

$$\text{Now, } T = 3B \text{ and } 2T = 3C \Rightarrow C = 2B.$$

$$\text{Also, } B = N$$

$$\text{So } T + C - B + N = 60$$

$$\Rightarrow 3B + 2B - B + B = 60 \Rightarrow 5B = 60 \Rightarrow B = 12.$$

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126. a As the clock strikes three times in 6 seconds i.e. at 0 seconds, 3 seconds and 6 seconds, means taking 3 seconds in between two strikes.
Now, clock has to strike 9 times at 9 o'clock.
So it will take $8 \times 3 = 24$ seconds.

For questions 127 and 128:

| Name | E - 1 | E - 2 | E - 3 |
|--------------------------|-------|-------|-------|
| Order of starting time | 2 | 3 | 1 |
| Order of completion time | 3 | 1 | 2 |

127. c E - 3

128. a E - 1

For questions 129 and 130:

The order of students from brightest to dullest is

$\left. \begin{array}{l} \text{QR} \\ \text{PB} \end{array} \right\} \begin{array}{l} \text{A} \\ \text{B} \end{array}$

129. b P is clearly the brightest among all the students.

130. c R is the dullest among the three students from Elite School.

131. d If Rafael enters before Roger, then

10 Rafael 5 Roger 10

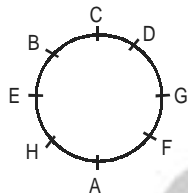
\therefore Total number students in the class
= $10 + 1 + 5 + 1 + 10 = 27$

If Roger enters before Rafael, then

4 Roger 5 Rafael 4

\therefore Total numbers of students = $4 + 1 + 5 + 1 + 4 = 15$.
Hence, the exact number of students cannot be determined.

For questions 132 to 134:



132. a 133. c 134. b

135. d There is no evidence given to support or deny a relationship between balloons and tables. Hence, none of the first three given options can be conclusively deduced.

For questions 136 and 137:

The arrangements can be

A - C - E
or E - C - A

136. b So C must be sitting in the middle.

137. a A and E are always at the extreme ends.

138. c Commission earned by D in 1994 = Rs.29,800
Commission earned by A in 1994 = Rs.24,600

So the required percentage = $\frac{5200}{24600} \times 100$
= 21.14%
= 21% approximately.

139. b Commission earned by B in 1993 = Rs.28,000
Total commission earned by all salesmen in 1993 = Rs.1,46,960

So the required percentage = $\frac{28,000}{1,46,960} \times 100 = 19.05\%$
= 20% approximately.

140. b The numbers in the second row are squares of the numbers in the first row decreased by 2 i.e. $n^2 - 2$
So missing number must be $(8)^2 - 2 = 64 - 2 = 62$.

141. d The order is 2, 5, 1, 3, 6, 4

142.*c Options (b) and (d) can be eliminated as they are specific in nature. Option (c) is the best answer amongst the given although this can act only as one premise while concluding the given statement. We need more information to conclusively deduce the given statement.

143. b Let the length of each candle be L.
And n is the number of hours.

$$\text{Now, } 2\left(L - \frac{nL}{4}\right) = L - \frac{nL}{6}$$

$$\Rightarrow 2L - \frac{nL}{2} = L - \frac{nL}{6} \Rightarrow L = \frac{nL}{3} \Rightarrow n = 3$$

Hence, Ramaswami went to sleep after studying 3 hours in candle light.

144. c Let the numerator and denominator of the fraction be 2x and 3x.

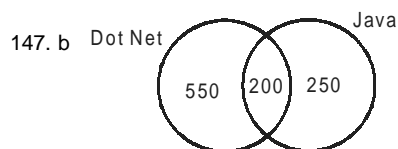
$$\text{So } \frac{2x-6}{3x} = \frac{2}{3} \times \frac{2x}{3x}$$

$$\Rightarrow 18x - 54 = 12x \Rightarrow 6x = 54 \Rightarrow x = 9$$

So the numerator = $2 \times 9 = 18$.

145. b According to the question,
 $100Y + X - 20 = 2(100X + Y)$
 $\Rightarrow 100Y + X - 20 = 200X + 2Y$
 $\Rightarrow 98Y - 199X = 20$
Solving, we get X = 26 and Y = 53.

146. d If we take two pieces then they can either be both of same colour, or of different colours. But the third one must be of one of the two colours. So by taking out 3 pieces we can get atleast one pair.



Number of SW personnels having both skills are 200.

148. b If we assume that the set athlete has only good and bad athletes and that good and bad athletes are complimentary sets, then Statement (b) is a paraphrase of the conclusion statement and hence the answer.

149. b The missing numbers are 8, 1024 and 32.

$$17 = \frac{17x}{1-x}$$

$$\Rightarrow \frac{x}{1-x} = 1$$

$$\Rightarrow x = 1 - x$$

$$\Rightarrow x = \frac{1}{2}$$

$$\text{So } (2x) * x = 2 \times \frac{1}{2} \times \frac{1}{2} = \frac{1}{2}$$