P.Y.Q

2023

1.(a) Logic :- (First number = Second number)^2 = Third number
(55, 11, 25):- (55+11)^2- (5)^2 = 25
(64, 16, 16):- (64÷ 16)^2:- (4)^2 = 16
Similarly,
(33, 11, 9):- (3311)^2- (3)^2 = 9

2.(d) Logic - (Second number + First number) = Perfect square
5:45:- (45 ÷ 5) = 9 = Perfect square
3:3-(3 ÷ 3) = 1 = Perfect Square
Similarly,
6: ? :-(96 ÷ 6) = 16 = Perfect Square

3.(a) Logic:(First no. + Third no.) × 4 = Second no.
(8, 44, 3) → (8+3) × 4 = 11 × 4 = 44
(12, 60, 3)→ (12+3) × 4 = 15 × 4 = 60
Similarly,
(12, 68, 5)→ (12+5) × 4 = 17 × 4 = 68

4.(c) Logic: (3rd no. - 1st no.)2+ 1stno. = 2nd no.
(31, 47, 35)→ (35-31)2+31 = 47
(51, 67, 55)→ (55-51)2+51 = 67
Similarly,
(13, 29, 17)→ (17-13)2 + 13 = 29

5.(d) Logic:(First no.)^2-$\left(\frac{\text{Second number}}{2}\right)^3$ = Third no.

(12, 8, 80) → (12)^2 - $\left(\frac{8}{2}\right)^3$ = 80

(16, 10, 131) → (16)^2 - $\left(\frac{10}{2}\right)^3$ = 131

(9, 6, 54) → (9)^2 - $\left(\frac{6}{2}\right)^3$ = 54

6.(c) Logic :- (First number + Second number) = (Third number ÷ 2) × 3
(82, 35, 78):- (82 +35) = (78÷2) × 3, 117 = 39 × 3,117 = 117
(18, 27, 30):- (18+27) = (30÷2) × 3, 45 = 15 × 3, 45 = 45
Similarly,
(27, 33, 40):- (27+33) = (40 ÷ 2) × 3, 60 = 20 × 3, 60 = 60

7.(b) Logic :- (Third number ÷ First number) × 7 = Second number
(49, 63, 441) - (44149) × 7→ (9) × 7 = 63
(7, 14, 14)-(147) x 7→ (2) × 7 = 14
Similarly,
(14, 28, 56):- (56 ÷ 14) × 7→ (4) × 7 = 28

8.(a) Logic:- (First number Second number)= 61, (Third number - Second number) = 109
(85, 24, 133):- (85-24)=61, (133-24) = 109
(97, 36, 145):- (97-36) = 61, (145-36) = 109
Similarly,
(79, 18, 127) :- (79-18) = 61, (127-18) = 109

9.(b) Logic:- Second number ÷ (First number × Third number) = 3
(2, 114, 19):- 114 ÷ (2 × 19) = 3, 114 ÷ 38 = 3
(12, 216, 6):- 216 ÷ (12 × 6) = 3, 216 ÷ 7 = 23
Similarly,
(6, 144, 8):- 144 ÷ (6 × 8) = 3, 144 ÷ 48 = 3

10.(d) Logic:- (First number + Second number)^2 + 2 = Third number
(4, 5, 83):- (4+5)^2 +2 = 83, 81+2 = 83
(5, 5, 102): (5+5)^2 +2=102, 100 + 2 = 102
Similarly,
(8, 3, 123):- (8+3)^2 + 2 = 123, 121+ 2 = 123

11.(d) Logic :- (First number) ÷ (Third number) = Second number
(312, 24, 13) - (312) ÷ 13 = 24
(645, 43, 15):- (645) ÷ 15 = 43
Similarly,
(374, 22, 17):- (374) ÷ 17 = 22

12.(d) Logic:- (First number)^2 + (Third number)^2 = Second number
(8,388, 18):- (8)^2 + (18)^2 = 388, 64 + 324 388
(11, 137, 4):- (11)^2 + (4)^2 = 137, 121 +16= 137
Similarly,
(14, 221, 5):- (14)^2 + (5)^2 = 221,

196 + 25 = 221

13.(d) Logic:- (First number ÷ Second number) + 2 = Third number
(24, 3, 10):- (24 ÷ 3) + 2=10, 8+2=10
(144, 9, 18):- (144 ÷ 9) + 2=18, 16+2=18
Similarly,
(133, 7, 21):- (133 ÷ 7) + 2=21, 19+2=21

14.(d) Logic - (Second number First number) ÷ 2 = Third number
(12, 40, 14):- (40-12) ÷ 2
→ (28) ÷ 2 = 14
(15, 33, 9):- (33-15)÷2
→(18) + 2 = 9
Similarly,
(21, 91, 35):- (91-21)+2
→ (70) + 2 = 35

15.(a) Logic - (First number)^2 – 100 = Second number
17:189:- $(17)^2$-100 → 289 - 100 = 189
13:69:- $(13)^2$-100 → 169 - 100 = 69
Similarly,
18: ? :-$(18)^2$ – 100 → 324 - 100 = 224

16. (a) Logic - [(First number) ÷ Second number] × 3 = Third number
(36, 6, 18):- (36 ÷ 6) × 3 → (6) × (3) = 18
(35, 5, 21)-(355) × 3 → (7) × (3) = 21
Similarly,
(49, 7, 21):- (49 ÷ 7) × 3 → (7) × (3) = 21

17.(a) Logic - (First number Second number) × 3 = Third number
(54, 32,66):- (54-32) × 3 → (22) × 3 = 66
(49,31,54):- (49-31) × 3 → (18) × 3 = 54
Similarly,
(39, 18,63)-(39-18) × 3 → (21) × 3 = 63

18.(b) Logic: (Second number + 1)^2 = First number
121:10 → $(10 + 1)^2 = 11^2 = 121$
256:15 → $(15+ 1)^2 = 16^2 = 256$
441 : ? → $(20+ 1)^2 = 21^2 = 441$

19.(a) Logic: (First number - Second number) + 10 = Third Number
(168, 35, 143) →(168-35) + 10 = 133 + 10 = 143
(182, 65, 127) → (182-65)+10=117+ 10 = 127
Similarly,
(142, 83, 69) → (142 -83) + 10 = 59 + 10 = 69

20.(b) Logic:- (First number) × 3 = Second number
7:21 :- (7) × 3 = 21
14:42 :- (14) × 3 = 42
Similarly,
18: ? :- (18) × 3 = 54

21.(d) Logic:- (First number - Third number)^2= Second number
(13, 64, 5):- $(13 -5)^2$ → $(8)^2 = 64$
(10, 1, 9)-$(10-9)^2$ → $(1)^2 = 1$
Similarly,
(16, 49, 9):- $(16-9)^2$ → $(7)^2 = 49$

22.(b) Logic:- (First number ÷ 5) + (Second number ÷ 3) = Third number
(15, 21, 10):- (15 ÷ 5) + (21 ÷ 3) →
(3) + (7) = 10
(25, 36, 17):- (25 ÷ 5) + (36 ÷ 3) →
(5) + (12) = 17
Similarly,
(100, 33,31):- (100 ÷ 5) + (33 ÷ 3) →
(20) + (11) = 31]

23.(b) Logic:- (Second number First number) = 61
(Third number - Second number) = 61
(47,108, 169):- (108-47) = 61,
(169-108) = 61
(22, 83, 144) :- (83 - 22) = 61,
(144-83) = 61
Similarly,
(51,112, 173) - (112-51) = 61,
(173-112)=61

24.(a) Logic :- First number = (Second number)^2 × (Second number ÷ 3)
(243 : 9):- 243 = $(9)^2$ × (9 ÷ 3),
81 × 3 = 243
(72 : 6) :- 72 $(6)^2$ × (6 ÷ 3),
36 × 2 = 72
Similarly,
(576: ?) 576 $(12)^2$ × (12 ÷ 3),
144 × 4 = 576

25.(d) Logic:- (First number × Second number) - (First number ÷ Second number) = Third number
(100, 2, 150):- (100 × 2) - (100 ÷ 2)
150, 200-50 = 150

(50, 5, 240):- (50 × 5) - (50 ÷ 5) = 240, 250-10=240
Similarly,
(16, 8, 126):- (16 × 8) - (16÷ 8) = 126, 128 - 2 = 126

26.(c) Logic - (First number)^3 (Second number)^3 = Third number
(12, 7, 1385): (12)^3 - (7)3 →(1728) - (343) = 1385
(19,15, 3484):- (19)^3 - (15)3 → (6859) - (3375) = 3484
Similarly,
(21, 16, 5165):- (21)^3 - (16)^3 → (9261-4096) = 5165

27.(b) Logic: (Second number)^2 - 2 = First number
(194, 14, 4) → 14^2 - 2 = 196-2 = 194
(527, 23, 5)→ 23^2 - 2 = 529 -2 = 527
(2, 2, 2) → 2^2 - 2 = 4-2=2

28.(c) Logic: {(First number)^2 + (Second number)^2 } × 2 = Third Number
(4, 5, 82) → (4^2 +5^2) × 2 = 41 × 2 = 82
(6, 11, 314) → (6^2+11^2) × 2 = 157 × 2 = 314
Similarly,
(11, 9, 560) → (11^2 + 9^2) × 2
202 × 2 = 404 (not 560)

29.(d) Logic: {(First number)2 (Second number)2 } - 8 = Third Number
(7, 5, 16) → (72-52)-824 - 8=16
(12, 10, 36) → (122-102) - 8 = 44 - 8 = 36 Similarly,
(8, 7, 7) → (82-72) - 815 - 8 =7

30.(c) Logic - (First number)^2 + (Second number)^2 = Third number
(14, 10, 296):- (14)^2 + (10)^2 = 296
→ 196 +100 = 296
(8, 17, 353):- (8)^2 + (17)^2 = 353
→ 64 + 289 = 353 Similarly,
(5, 13, 194):- (5)^2 + (13)^2 = 194
→ 25 + 169 = 194

31.(d) Logic :- {(First number)2 - (Second number)2 }÷ 2 = Third number
(12, 4, 64):- {(12)2- (4)2} ÷ 2
→ (144-16)÷2128÷ 2 = 64
(8, 6, 14):-((8)2- (6)2} ÷ 2
→ (64-36)÷228 ÷ 2 = 14
Similarly,
(9, 5, 28):-((9)2 - (5)2} ÷ 2
→ (81-25) ÷ 2 = 56 ÷ 2 = 28

32.(a) Logic:- (First number + Third number) × 2 = Second number
(14, 60, 16):- (14+16) × 2 = 60
→ 30 × 2 = 60
(12, 40, 8):- (12+8) × 2 = 40
→ 20 × 2 = 40
Similarly,
(19, 80, 21):- (19+21) × 2 = 80
→ 40 × 2 = 80

33.(d) Logic:- (First number) × 5 = Third number
(15, 5, 375):- (15) × (5) × 5
→ (15) × (25)= 375
(14, 3, 210):- (14) × (3) × 5
→ (14) × (15) = 210
Similarly,
(11, 16, 880):- (11) × (16)×5
→ (11) × (80) = 880

34.(d) Logic - (First number)^3 (First number)× 3 = Second number
9:702 :-(9)^3 - (9) × 3 → 729 - 27 = 702
3:18 :- (3)^3 - (3) × 3 → 27 - 9 = 18
Similarly,
6: ? :-(6)^3 - (6) × 3 → 216-18 = 198

35.(d) Logic:- (First number)2 + (Second number)2 + [(First number + Second number)] = Third number
(6, 7, 98) :- (6)2+ (7)2 + [(6 + 7)]
→ (36 +49) + [13] 85+ 13 = 98
(8,10,182):- (8)2 + (10)2 + [(8 + 10)]
→ (64 +100) + [18] Ò! 164 + 18 = 182
Similarly,
(4, 5, 50):- (4)2 + (5)2 + [(4 + 5)]
→ (16+25) + [9] 41 + 9 = 50

36.(b) Logic: Second number × $\frac{\text{Second number}}{2}$ = First number

32: 8 → 8× $\frac{8}{2}$ = 8 × 4 = 32

72:12 → 12 × $\frac{12}{2}$ = 12×6=72

Similarly,

128 : ? → $16 \times \frac{16}{2}$ =16×8 = 128

37.(d) Logic: (Second number)^2 ÷ 3 = First number
192:24 →$(24)^2$ ÷ 3→ 576 ÷ 3 = 192
48:12 → $(12)^2$ ÷ 3→ 144 ÷ 3 = 48
Similarly,
432:? → $(36)^2$ ÷3→ 1296 ÷ 3 = 432

38.(a) Logic:- (Second number × Third number) = First number
(1000, 100,10):- (100 × 10) = 1000
(38, 19, 2):- (19 × 2) = 38
Similarly,
(125, 25, 5):- (25 × 5) = 125

39.(b) Logic:- (Second number) + (Third number) × 2 = First number
(300,100, 100):- (100) + (100) × 2 → 100+ 200 = 300
(88, 66, 11):- (66) + (11) × 2→ 66+22=88
Similarly,
(44, 22, 11):- (22) + (11) × 2→22 +22 = 44

40.(b) Logic:- (First number × 3) + Second number = Third number
(26, 62, 140):- (26 × 3) + 62 → 78 +62 = 140
(12, 39, 75):- (12 × 3) + 39 → 36 +39 = 75
Similarly,
(20, 48, 108):- (20 × 3) + 48 → 60+ 48 = 108

41.(b) Logic: (First number × 6) Second number and (Second number × 2) Third number
(5, 30, 60) → 5 × 6 = 30 and 30 × 2 = 60
(11, 66, 132) → 11×6 = 66 and 66 × 2 = 132 Similarly,
(14, 84, 168) → 14 × 684 and 84 × 2 = 168

42.(c) Logic - (First number × Second number) × 4 = Third number
(5, 7, 140):- (5 × 7) × 4→ 35 × 4 = 140
(6, 4, 96) :- (6 × 4) × 4 → 24 × 4 = 96
Similarly,
(9, 2, 72) (9 × 2) × 4 → (18) × 4 = 72

43.(b) Logic:- First number = (Second number × 2) + Third number
(34, 12, 10) → 34 = (12 × 2) + 10 → 24 + 10 = 34
(56, 17, 22) → 56 = (17 × 2) + 22 → 34 + 22 = 56
Similarly,
(46, 19, 8) → 46 = (19 × 2) + 8 → 38 + 8 = 46

44.(c) Logic - (First number × 3) Second number, (Second number) × 2 Third number
(15, 45,90):- (15 × 3) = 45, (45 × 2) = 90
(8, 24, 48):- (8 × 3) = 24, (24× 2) = 48
Similarly,
(6, 18, 36):- (6 × 3) = 18, (18 × 2) = 36

45.(c) Logic:- (Square root of first number) × (Square root of second number) = Third number
(4, 1024, 64):- $\left(\sqrt{4}\right) \times \left(\sqrt{1024}\right) \rightarrow 2 \times 32 = 64$
(225, 81, 135):- $\left(\sqrt{225}\right) \times \left(\sqrt{81}\right) \rightarrow 15 \times 9 = 135$
Similarly,
(49, 841, 203):- $\left(\sqrt{49}\right) \times \left(\sqrt{841}\right) \rightarrow 7 \times 29 = 203$

46.(b) Logic :- (First number ÷ 4)^2 - (Second number ÷ 6)^2 = Third number
(36, 24, 65):- $(36 \div 4)^2 - (24 \div 6)^2 \rightarrow$ (81 - 16) = 65
(40, 54, 19):- $(404)^2 - (54 \div 6)^2 \rightarrow$ (100-81) = 19 Similarly,
(20, 18, 16):- $(20 \div 4)^2 - (18 \div 6)^2 \rightarrow$ (25-9) = 16

47.(d) Logic :- (First number - Second number) (Second number - Third number) = 41
(189, 148, 107):- (189-148) = 41, (148-107) = 41

(206, 165, 124):- (206-165) = 41, (165-124) = 41
Similarly,
(108, 67, 26):- (108 - 67) = 41, (67 - 26) = 41

48.(d) Logic (First number ÷ 11) - (Second number ÷ 9) = Third number
(121, 81, 2) → (121 ÷ 11)-(81÷9) → (11)-(9)=2
(88, 54, 2) → (88 ÷ 11)-(54÷9) → (8) - (6)=2
(77, 18, 5) → (77÷11)-(18÷9) → (7) - (2) = 5

49. Logic :- $\frac{\text{First number + Third number}}{2}$ = Second number

(71, 114, 157) = $\frac{71 + 157}{2} = \frac{228}{2}$ = 114

(36, 79, 122) = $\frac{36 + 122}{2} = \frac{158}{2}$ = 79
Similarly,

(25, 68, 111) = $\frac{25 + 111}{2} = \frac{136}{2}$ = 68

50.(b) Logic [(Third number - :- number) × 2] ÷ (First number) = 200
(4,14, 828)-[(828) - (14)× 2] ÷ 4 → (800) ÷ 4 = 200
(3,10, 620):- [(620) - (10)×2] ÷ 3 → (600) ÷ 3 = 200
Similarly,
(2, 50, 500)-[(500) - (50)×2] ÷2 → (400) ÷ 2 = 200

51.(b) Logic :- (Second number ÷ First number) + (First number) = Third number
(4, 16, 8) :- (16 ÷ 2) + (4) = (4) + (4) = 8
(2, 14, 9) :- (14 ÷ 2) + (2) = (7) + (2) = 9
(2, 8, 6) :- (8 ÷ 2) + (2) = (4) + (2) = 6

52.(d) Logic :- (Second number + Third number ÷ 2 = First number
(6, 4, 8):- (4+8) ÷ 2 → (12) ÷ 2 = 6
(17, 6, 28):- (6 +28) ÷ 2 → (34) ÷ 2 = 17
Similarly,
(13,5, 21):- (5+21) ÷ 2 → (26) ÷ 2 = 13

53.(d) Logic - (First number + Third number) × 5 = Second number
(7, 150, 23):- (7 +23) × 5 → (30) × 5 = 150
(11,75, 4):- (11+4) × 5 → (15) × 5 = 75
Similarly,
(15, 140, 13):- (15+13) × 5 → (28) × 5 = 140

54.(b) Logic - (Third number Second number) ÷ 7 = (First number)
(28, 65, 261):- (261-65) ÷ 7→ 196 ÷ 7 = 28
(37, 83, 342) :- (342-83) ÷ 7→ 259 ÷ 7 = 37
Similarly,
(46, 92, 414) :- (414 - 92) ÷ 7 → (322 ÷ 7) = 46

55.(d) Logic :- (First number + Third number) ÷ 2 = Second number
(15, 28, 41):- (15+41) ÷ 2 = 56 ÷ 2 = 28
(19, 32, 45) :- (19+45) ÷ 2 = 64 ÷ 2 = 32
Similarly,
(22, 35, 48):- (22 +48) ÷ 2 = (70) ÷ 2 = 35

56.(d) Logic :- (First number + Third number) ÷ 2 = Second number
(9, 20, 31):- (9+31) ÷ 2 (40) ÷ 2 = 20
(38, 49, 60) :- (38 + 60) ÷ 2
(98)÷2=49
Similarly,
(14, 24, 34) :- (14+34) ÷ 2 = (48) ÷ 2 = 24

57.(d) Logic - (First number + Second number) × 3 = Third number
(2,7, 27)- (2 +7) × 3 → (9) × 3 = 27
(6, 15, 63):- (6+15) × 3 → (21) × 3 = 63
Similarly,
(8, 8, 48):-(8+8) × 3 → (16) × 3 = 48

58.(c) Logic :- (First number × Third num-

ber) × 2 = Second number
(25,150, 3):- (25 × 3) × 2Ò! (75) × 2 = 150
(18, 180, 5):- (18 × 5) × 2 Ò! (90) × 2 = 180
Similarly,
(52,728, 7) :- (52 × 7) × 2Ò! (364) × 2 = 728

59.(a) Logic: (First number Second number) + (First number ÷ Second number) = Third number
(10, 5, 52) → (10 × 5) + (105)
→ 50+ 2 = 52
(35, 7, 250) → (35 × 7) + (357)
→ 245 +5 = 250
Similarly,
(8, 4, 34) → (8 × 4) + (84)
→ 32+2 = 34

60.(c) Logic: (2 × first number) + second number = Third number
(12, 5, 29) → (2 × 12) + 5 → 24+ 5 = 29
(19, 12, 50) → (2 × 19) + 12 → 38 +12= 50
Similarly,
(15, 14, 44) → (2 × 15) + 14 → 30 + 14 = 44

61.(d) Logic: (Third number ÷ First = Second number)
(4, 14, 56) → 56 ÷ 4 = 14
(6, 15, 90) → 90 ÷ 6 = 15
Similarly,
(7, 16, 112)→ 112÷7=16

62.(a) Logic:- (First number Second number) + 3 = Third number
(47, 11, 61):- (47 +11) +3 → 58 +3 = 61
(13, 68, 84):- (13+ 68) + 3 → 81+ 3 = 84
Similarly,
(52, 88, 143):- (52 +88) + 3
→ 140 + 3 =143

63.(d) Logic: (First number Second number) ÷ 2 = Third number
(7, 15, 11) → (7+15) ÷ 2 → 22 ÷ 2 = 11
(9, 19, 14)→ (9+19) ÷ 2 → 28÷ 2 = 14
Similarly,
(11, 23, 17)→ (11+23) ÷ 2 → 34 ÷ 2 = 17

64.(b) Logic :- (First number)^2 + (Second number)^2 = Third number
(2, 9, 85) :- $(2)^2 + (9)^2 \rightarrow 4+ 81 = 85$
(3, 9, 90):- $(3)^2 + (9)^2 \rightarrow 9+ 81 = 90$
Similarly,
(7,9,130):- $(7)^2 + (9)^2 \rightarrow 49+ 81 = 130$

65.(a) Logic: (First number + Third number)^2 = Second number
(4, 81, 5)→ $(4+ 5)^2 = 9^2 = 81$
(3, 144, 9) → $(3+9)^2 = 12^2 = 144$
Similarly,
(2, 100, 8) → $(2 + 8)^2 = 10^2 = 100$

66.(a) Logic:- First number (Second number × Third number) ÷ 10
(60, 15, 40):- 60 = (15 × 40) ÷ 10
→ 600 ÷ 10 = 60
(100, 50, 20):- 100 = (50 × 20)+10
→ 1000 ÷ 10 = 100
Similarly,
(200, 40, 50):- 200 = (40 × 50) 10
→ 2000 ÷ 10 = 200

67.(b) Logic:- (Second number - First number) = (Third number - Second number) = 8
(15, 23, 31):- (23-15) 8, (31-23) = 8
(33, 41, 49):- (41-33) = 8, (49-41) = 8
Similarly,
(20, 28, 36):- (28-20) = 8, (36-28) = 8

68.(a) Logic :- (First number + Third number) (Second number)× 2 + 2
(17, 26, 37):- (17+37) = (26 × 2) + 2
→ (52) + 2 = 54
(170,197,226):- (170 +226) =
(197 × 2) +2 → (394) + 2 = 396
Similarly,
(48, 63, 80):- (48 +80) = (63 × 2) +2
→ (126) + 2 = 128

69.(b) Logic:- (First number + 1)^2 + 1 = Second number
(7,65):- $(7+1)^2 + 1 \rightarrow 64 + 1 = 65$
(11, 145):- $(11 +1)^2 + 1 \rightarrow 144 + 1 = 145$
Similarity,

(8,82):-$(8 + 1)^2 + 1 \rightarrow 81 + 1 = 82$

70.(b) Logic :- (First number ÷ Second number) $= \frac{3}{5}$

$(39, 65) :- (39 \div 65) = \frac{3}{5}$

$(63, 105) :- (63 \div 105) = \frac{3}{5}$

Similarly,

$(96, 160) :- (96 \div 160) = \frac{3}{5}$

71.(c) Logic:(First number × Second number × 3)= Third number
(3, 6, 54) → 3 × 6 × 3 = 54
(4, 2, 24) → 4 × 2 × 3 = 24
Similarly,
(3, 4, 36) → 3 × 4× 3 = 36

72.(b) Logic :- (Second number - First number) = 4 (Third number - Second number) = 6
(13, 17, 23):- (17-13) = 4, (23-17) = 6
(8, 12, 18):- (12-8)=4, (18-12)=6
Similarly,
(18, 22, 28):- (22-18) = 4, (28 - 22) = 6

73.(a) Logic - (First number - Second number) × 3 = (Third number - Second number)
(12, 8, 20) → (12-8) × 3 = (20-8) 12 → 12
(7,3,15) → (7-3) × 3 (15-3)=12 → 12
Similarly,
(9, 4, 19) → (9-4) × 3 (19-4)=15 →15

74.(c) Logic - (First number - Second number) + 100 = Third number
(239, 127, 212):- (239 -127) + 100 → 112+ 100 = 212
(96, 64, 132):- (96-64) +100 → 32+ 100 = 132
Similarly,
(167, 89, 178):- (167-89) + 100 → 78 +100 = 178

75.(d) Logic :- All the numbers are cubes.
(8, 27, 125) → $(2^3, 3^3, 5^3)$
(64, 1331, 1728) → $(4^3, 11^3, 12^3)$
Similarly,
(216, 343, 512) → $(6^3, 7^3, 8^3)$

76.(a) Logic :- (First number + 6) = Second number, (Second number + 6) = Third number
(14, 20, 26) → (14+6) = 20, (20+6) = 26
(22, 28, 34) → (22 + 6) = 28, (28 +6) = 34
Similarly,
(32, 38, 44) → (32 + 6) = 38, (38+6) = 44

77.(c) Logic :- (First number × Third number) = Second number
(12,60,5):- (12) × (5) = 60
(14, 56, 4):- (14) × (4) = 56
Similarly,
(10, 100, 10):- (10 × 10) = 100

78.(c) Logic :- (First number + Second number) ÷ 2 = Third number
(100, 150, 125) :- (100 + 150) ÷ 2 = (250) ÷ 2 = 125
(500, 400, 450) :- (500+ 400) ÷ 2 = (900)÷ 2 = 450
Similarly,
(200, 400, 300) :- (200 + 400) ÷ 2 = (600) ÷ 2 = 300

79.(a) Logic :- (First number + Third number)^2 = (Second number)
(4, 64, 4) :- $(4+4)^2 = (8)^2 = 64$
(5, 100, 5):- $(5+ 5)^2 = (10)^2 = 100$
Similarly,
(8,256, 8):-$(8+8)^2$ $(16)^2 = 256$

80.(d) Logic - (First number + Second number)^2 = Third number
(4, 3, 49):- $(4+3)^2 = 49$
(5,4, 81)-$(5+4)^2 = 81$
Similarly,
(6, 5, 121) - $(6 + 5)^2 = 121$

81.(d) Logic :- (First number) × 5 (Second number), (Second number) × 5 = (Third number)
(10, 50,250) :- (10) × 5 = 50, (50) × 5 = 250
(20, 100, 500) :- (20) × 5 = 100, (100) × 5 = 500

Similarly,
(8,40,200):- (8) × 5 = 40, (40) × 5 = 200

82.(b) Logic - (Second number + Third number)^2 = (First number)
(144,8,4)-(8+4)^2= (12)^2 = 144
(256, 12, 4)-(12+4)^2 = (16)^2 = 256
Similarly,
(400, 16, 4)-(16+4)^2 = (20)^2 = 400

83.(b) Logic - (Third number) × 3 = (Second number), (Second number) × 3 = First number
(243, 81, 27):- (27) × 3 = 81, (81) × 3 = 243
(99, 33, 11)-(11) × 3 = 33, (33) × 3 = 99
Similarly,
(27, 9, 3)-(3) × 3 = 9, (9) × 3 = 27

84.(d) Logic - (First number)^2 = (Second number), (First number)^3 = Third number
(7, 49, 343) :- (7)^2 = 49, (7)^3 = 343
(8, 64, 512):- (8)^2 = 64, (8)^3 = 512
Similarly,
(9,81,729):- (9)^2 = 81, (9)^3 = 729

85.(b) Logic :- (First number) × 3 = Second number, (Second number) × 3 (Third number)
(10, 30, 90):- (10) × 3 = 30, (30) × 3 = 90
(20, 60, 180):- (20) × 360, (60) × 3 = 180
Similarly,
(30, 90, 270):- (30) × 3 = 90, (90) × 3 = 270

86.(b) Logic :- Second number = (First number × 2) + 1, Third number = (Second number × 2) + 2
35 = (17 × 2) + 1, 72 = (35 × 2) +2
27 = (13 × 2) + 1, 56= (27 × 2) +2
Similarly,
31 = (15 × 2) + 1, 64 = (31 × 2) +2

87.(a) Logic - [(1st number) × (2nd number)] × 3 = (3rd number)
(4, 6, 72):- (4 × 6) × 3 = (24)× 3 = 72
(5, 7, 105):- (5 × 7) × 3 = (35)× 3 = 105
Similarly,
(6, 8, 144):- (6 × 8) × 3 = (48) × 3 = 144

88.(a) Logic :- (First number) × 2-1 = (Second number), (Second number) × 2 – 2 = (Third number)
(19, 37, 72):-(19) × 2 137, (37) × 2-2 = 72
(15, 29, 56):-(15) × 2-1 = 29, (29) × 2-256
Similarly,
(11,21, 40):- (11) × 2-1= 21, (21) × 2-2 = 40

89.(c) Logic :- (First number) × 2 + 2 = (Second number), (Second number)× 2 + 2 = (Third number)
(13, 28, 58)-(13) × 2+2 = 28, (28) × 2 + 2 = 58
(16, 34, 70):- (16) × 2+2 = 34, (34) × 2+2 = 70
Similarly,
(11, 24, 50):- (11) × 2 + 2 = 24, (24) × 2 + 2 = 50

90.(a) Logic :- Second number = First number + 50, Third number = Second number + 50
(20, 70, 120):- 70 = 20 + 50, 120 = 70 + 50
(120, 170, 220):- 170 = 120 + 50, 220 = 170 + 50
Similarly,
(420, 470, 520):- 470 420 + 50, 520 = 470 + 50

91.(b) Logic :- (Set of prime numbers) → (2, 3, 5), (5, 7, 11)
Similarly,
(11, 13, 17)

92.(c) Logic :- 3rd number = (1st number + 2nd number)^2
(4, 1, 25) → (4+1)^2 = (5)^2 = 25
(8, 5, 169) → (8 + 5)^2 = (13)^2 = 169
Similarly,
(5, 9, 196) → (5+ 9)^2 = (14)^2 = 196

93.(b) Logic: - [(Sum of the digits of first number) × 11 Second number,
[Add the reverse of second number with the second number itself] = Third number

i.e. (56, 121, 242) = [56, (5+6) x 11, 121 + 121 = 242]
(78, 165, 726)= [78, (7+8) x 11, 165+ 561 = 726]
(36, 99, 198) = [36, (6 + 3) × 11, 99 + 99 198]

94.(c) Logic : Gap of one prime number between two prime numbers.
(79, 89, 101) → (79, **83**, 89),
→ (89, **97**, 101)
(31, 41, 47) → (31, **37**, 41),
→ (41,**43**,47)
Similarly,
(29, 37, 43) → (29, **31**, 37),
→(37, **41**, 43)

95.(c) Logic: (a-3) × 3 = b and b + 7 = c
Here,
(36-3) × 3 = 99, 99 + 7 = 106
(72-3) × 3 = 207, 207 +7 = 214
Similarly,
(24-3) × 3 = 63, 63+ 7 = 70

96.(d) Logic: - (Third number - Second number) = First number
(136,48,184) → (184-48) = 136
(189, 37, 226) → (226-37) = 189
Similarly,
(116, 62, 178) → (178 - 62) =116

97.(a) Logic - (Second number × 2) = First number, (Second number × 4) = Third number
(18,9,36) → (9 × 2) = 18, (9 × 4) = 36
(36,18,72) → (18 × 2) = 36, (18 × 4) = 72
Similarly,
(32, 16, 64) → (16 × 2) = 32, (16 × 4) = 64

98.(c) Logic: (first number × 2) = second number, Second number + 3 = third number
Here,
(39, 78, 81):- 39 × 2 = 78, 78+ 3 = 81
(42, 84, 87):- 42 × 2 = 84, 84 + 3 = 87
Similarly,
(84, 168, 171):- 84 × 2 = 168, 168 + 3 = 171

99.(d) Logic : - (First number × 2) : Second number, (Second number × 2) = Third number
(59,118, 236) → (59× 2) = 118
(118 × 2) = 236,
(64,128, 256) → (64 × 2) = 128,
(128 × 2) = 256
Similarly,
(82,164,328) → (82 x 2) = 164, (164 × 2) = 328

100.(c) Logic-: (First number × 4-3)= Second number (Second number × 4 + 3) = Third number
Here,
(18, 69, 279) → (18 × 4-3)= 69 (69 × 4+3)= 279
(12, 45, 183) → (12 × 4-3)= 45 (45 × 4 + 3) = 183
Similarity,
(32, 125, 503) → (32 × 4 - 3) = 125
(125 × 4 + 3) = 503