3.18 Number Connections: 2-hour Pack

GL ASSESSMENT GL-VR-11+ · about 120 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Each question shows two number pairs written in the same style, for example: 5 (12) 7 followed by 9 (?) 6. The number in brackets is linked to the two outside numbers by a hidden rule. Work out the rule from the first pair, then apply exactly the same rule to the second pair to work out the missing number in brackets. Choose your answer from the five options given. There is only one correct answer to each question.

Worked example. 5 (15) 3 8 (?) 6 Work out the connection between the numbers in the first pair, then use the same connection to find the missing number in the second pair. **Answer: 48.** The number in brackets is the product of the two outside numbers: 5 x 3 = 15. Applying the same rule to the second pair: 8 x 6 = 48.

1 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

6 (11) 5
9 (45) 6
11 (?) 8

- [ ] A) 58
- [ ] B) 56
- [ ] C) 30
- [ ] D) 38
- [ ] E) 57

---

2 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

7 (40) 5
12 (156) 12
9 (?) 3

- [ ] A) 30
- [ ] B) 31
- [ ] C) 15
- [ ] D) 29
- [ ] E) 36

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3 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

8 (5) 3
10 (8) 2
9 (?) 3

- [ ] A) 7
- [ ] B) 15
- [ ] C) 11
- [ ] D) 5
- [ ] E) 6

---

4 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

6 (16) 5
4 (18) 7
5 (?) 2

- [ ] A) 10
- [ ] B) 7
- [ ] C) 8
- [ ] D) 9
- [ ] E) 17

---

5 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

12 (48) 4
6 (27) 3
2 (?) 6

- [ ] A) 16
- [ ] B) 38
- [ ] C) 24
- [ ] D) 23
- [ ] E) 25

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6 7 (43) 3
9 (?) 4

- [ ] A) 74
- [ ] B) 29
- [ ] C) 69
- [ ] D) 65
- [ ] E) -61

---

7 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.
3 (30) 10
12 (108) 9
11 (?) 3

- [ ] A) 33
- [ ] B) 22
- [ ] C) 34
- [ ] D) 32
- [ ] E) 28

---

8 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.
6 (9) 3
5 (7) 3
8 (?) 6

- [ ] A) 11
- [ ] B) 70
- [ ] C) 9
- [ ] D) 56
- [ ] E) 10

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9 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

6 (12) 3

11 (33) 4

10 (?) 10

- [ ] A) 40
- [ ] B) 91
- [ ] C) 90
- [ ] D) 89
- [ ] E) 110

---

10 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

5 (8) 2

8 (9) 7

10 (?) 5

- [ ] A) 50
- [ ] B) 14
- [ ] C) 16
- [ ] D) 15
- [ ] E) 105

---

11 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

6 (1) 5

7 (4) 3

4 (?) 2

- [ ] A) 14
- [ ] B) 2
- [ ] C) 5
- [ ] D) 1
- [ ] E) 3

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12 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

2 (24) 6
5 (24) 3
10 (?) 2

- [ ] A) 36
- [ ] B) 37
- [ ] C) 11
- [ ] D) 35
- [ ] E) 20

---

13 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

4 (11) 6
7 (13) 5
12 (?) 4

- [ ] A) 40
- [ ] B) 16
- [ ] C) 17
- [ ] D) 18
- [ ] E) 15

---

14 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

4 (19) 5
8 (23) 5
2 (?) 6

- [ ] A) 21
- [ ] B) 18
- [ ] C) 6
- [ ] D) 16
- [ ] E) 10

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15 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

4 (18) 10
3 (17) 11
11 (?) 4

- [ ] A) 26
- [ ] B) 33
- [ ] C) 19
- [ ] D) 27
- [ ] E) 28

---

16 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

3 (17) 8
7 (33) 12
12 (?) 12

- [ ] A) 34
- [ ] B) 25
- [ ] C) 47
- [ ] D) 48
- [ ] E) 49

---

17 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

10 (22) 12
12 (15) 3
2 (?) 6

- [ ] A) 7
- [ ] B) 8
- [ ] C) 18
- [ ] D) 16
- [ ] E) 9

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18 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

12 (150) 6

7 (52) 3

5 (?) 12

- [ ] A) 38
- [ ] B) 17
- [ ] C) 36
- [ ] D) 37
- [ ] E) 72

---

19 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

9 (81) 9

2 (24) 12

7 (?) 10

- [ ] A) 69
- [ ] B) 24
- [ ] C) 70
- [ ] D) 71
- [ ] E) 17

---

20 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

11 (45) 12

6 (29) 11

4 (?) 4

- [ ] A) 16
- [ ] B) 15
- [ ] C) 20
- [ ] D) 17
- [ ] E) 12

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21 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

2 (7) 5

11 (18) 7

9 (?) 9

- [ ] A) 19
- [ ] B) 81
- [ ] C) 17
- [ ] D) 18
- [ ] E) 36

---

22 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

6 (20) 2

11 (42) 9

10 (?) 7

- [ ] A) 51
- [ ] B) 36
- [ ] C) 37
- [ ] D) 34
- [ ] E) 38

---

23 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

4 (20) 4

7 (151) 12

10 (?) 4

- [ ] A) 16
- [ ] B) 26
- [ ] C) 50
- [ ] D) 25
- [ ] E) 27

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24 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

3 (27) 6

6 (39) 7

2 (?) 7

- [ ] A) 14
- [ ] B) 26
- [ ] C) 24
- [ ] D) 28
- [ ] E) 27

---

25 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

11 (176) 8

7 (98) 7

6 (?) 9

- [ ] A) 108
- [ ] B) 109
- [ ] C) 107
- [ ] D) 48
- [ ] E) 54

---

26 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

12 (36) 4

10 (90) 10

11 (?) 3

- [ ] A) 22
- [ ] B) 88
- [ ] C) 21
- [ ] D) 23
- [ ] E) 44

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27 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

6 (34) 2

11 (115) 6

7 (?) 4

- [ ] A) 23
- [ ] B) 44
- [ ] C) 45
- [ ] D) 46
- [ ] E) 56

---

28 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

7 (10) 4

11 (13) 3

8 (?) 7

- [ ] A) 13
- [ ] B) 113
- [ ] C) 31
- [ ] D) 15
- [ ] E) 14

---

29 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

5 (53) 8

10 (43) 3

9 (?) 2

- [ ] A) 30
- [ ] B) 25
- [ ] C) 16
- [ ] D) 29
- [ ] E) 28

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30 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

11 (54) 4
8 (34) 3
2 (?) 12

- [ ] A) 14
- [ ] B) 13
- [ ] C) 35
- [ ] D) 33
- [ ] E) 34

---

31 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

10 (38) 8
3 (11) 2
7 (?) 7

- [ ] A) 28
- [ ] B) 63
- [ ] C) 98
- [ ] D) 29
- [ ] E) 27

---

32 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

10 (200) 10
8 (208) 12
7 (?) 5

- [ ] A) 40
- [ ] B) 26
- [ ] C) 74
- [ ] D) 75
- [ ] E) 73

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33 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

10 (75) 5

5 (21) 2

12 (?) 4

- [ ] A) 28
- [ ] B) 32
- [ ] C) 127
- [ ] D) 128
- [ ] E) 129

---

34 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

12 (30) 8

3 (23) 10

6 (?) 11

- [ ] A) 26
- [ ] B) 7
- [ ] C) 132
- [ ] D) 27
- [ ] E) 28

---

35 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

5 (7) 3

6 (16) 11

7 (?) 8

- [ ] A) 15
- [ ] B) 13
- [ ] C) 23
- [ ] D) 14
- [ ] E) 71

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36 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

12 (22) 2
8 (10) 6
11 (?) 8

- [ ] A) 75
- [ ] B) 14
- [ ] C) 13
- [ ] D) 15
- [ ] E) 20

---

37 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

10 (88) 8
5 (24) 4
7 (?) 11

- [ ] A) 88
- [ ] B) 28
- [ ] C) 29
- [ ] D) 89
- [ ] E) 87

---

38 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

11 (28) 6
6 (22) 10
4 (?) 10

- [ ] A) 19
- [ ] B) 26
- [ ] C) 18
- [ ] D) 17
- [ ] E) 42

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39 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

7 (12) 6

5 (12) 8

11 (?) 10

- [ ] A) 20
- [ ] B) 19
- [ ] C) 120
- [ ] D) 21
- [ ] E) 99

---

40 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

12 (66) 6

8 (28) 4

5 (?) 2

- [ ] A) 7
- [ ] B) 15
- [ ] C) 12
- [ ] D) 8
- [ ] E) 9

---

41 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

12 (142) 11

11 (43) 3

4 (?) 8

- [ ] A) 41
- [ ] B) 42
- [ ] C) 20
- [ ] D) 24
- [ ] E) 43

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42 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

5 (48) 8

10 (44) 4

6 (?) 9

- [ ] A) 63
- [ ] B) 64
- [ ] C) 60
- [ ] D) 62
- [ ] E) 45

---

43 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

2 (13) 12

3 (4) 2

7 (?) 12

- [ ] A) 33
- [ ] B) 19
- [ ] C) 94
- [ ] D) 17
- [ ] E) 18

---

44 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

7 (58) 9

4 (22) 6

11 (?) 9

- [ ] A) 129
- [ ] B) 130
- [ ] C) 60
- [ ] D) 90
- [ ] E) 131

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45 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

7 (51) 10
6 (36) 6
10 (?) 7

- [ ] A) 51
- [ ] B) 3
- [ ] C) 149
- [ ] D) 52
- [ ] E) 50

---

46 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

12 (48) 12
7 (32) 9
2 (?) 6

- [ ] A) 17
- [ ] B) 15
- [ ] C) 14
- [ ] D) 16
- [ ] E) 12

---

47 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

9 (59) 5
6 (90) 12
3 (?) 11

- [ ] A) 15
- [ ] B) 46
- [ ] C) 47
- [ ] D) 25
- [ ] E) 48

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48 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

12 (121) 11
9 (16) 2
6 (?) 3

- [ ] A) 14
- [ ] B) 16
- [ ] C) 15
- [ ] D) 21
- [ ] E) 18

---

49 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

5 (7) 2
6 (16) 10
3 (?) 12

- [ ] A) 15
- [ ] B) 51
- [ ] C) 25
- [ ] D) 16
- [ ] E) 14

---

50 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

9 (110) 11
12 (65) 5
6 (?) 6

- [ ] A) 41
- [ ] B) 42
- [ ] C) 12
- [ ] D) 43
- [ ] E) 6

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51 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

10 (20) 10
12 (17) 5
11 (?) 11

- [ ] A) 22
- [ ] B) 44
- [ ] C) 132
- [ ] D) 21
- [ ] E) 23

---

52 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

5 (8) 2
11 (60) 6
12 (?) 9

- [ ] A) 98
- [ ] B) 129
- [ ] C) 100
- [ ] D) 99
- [ ] E) 225

---

53 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

2 (7) 4
9 (15) 5
10 (?) 11

- [ ] A) 31
- [ ] B) 23
- [ ] C) 22
- [ ] D) 41
- [ ] E) 21

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54 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

3 (15) 3
2 (23) 7
11 (?) 4

- [ ] A) 59
- [ ] B) 30
- [ ] C) 60
- [ ] D) 105
- [ ] E) 58

---

55 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

12 (6) 6
4 (1) 3
3 (?) 2

- [ ] A) 2
- [ ] B) 0
- [ ] C) 5
- [ ] D) 1
- [ ] E) 6

---

56 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

12 (72) 12
10 (57) 9
7 (?) 8

- [ ] A) 41
- [ ] B) 57
- [ ] C) 44
- [ ] D) 46
- [ ] E) 45

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57 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

12 (26) 4

5 (27) 12

8 (?) 12

- [ ] A) 30
- [ ] B) 31
- [ ] C) 29
- [ ] D) 28
- [ ] E) 96

---

58 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

11 (96) 8

6 (49) 7

2 (?) 5

- [ ] A) 21
- [ ] B) 15
- [ ] C) 17
- [ ] D) 16
- [ ] E) 14

---

59 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

11 (60) 5

4 (20) 4

5 (?) 11

- [ ] A) 65
- [ ] B) 4
- [ ] C) 66
- [ ] D) 55
- [ ] E) 67

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60 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

8 (96) 11

2 (16) 7

6 (?) 8

- [ ] A) 53
- [ ] B) 55
- [ ] C) 100
- [ ] D) 15
- [ ] E) 54

---

61 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

5 (120) 12

3 (48) 8

4 (?) 10

- [ ] A) 13
- [ ] B) 81
- [ ] C) 50
- [ ] D) 80
- [ ] E) 79

---

62 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

6 (36) 5

4 (40) 9

3 (?) 3

- [ ] A) 12
- [ ] B) 13
- [ ] C) 11
- [ ] D) 3
- [ ] E) 18

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63 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

11 (57) 8
12 (80) 8
10 (?) 3

- [ ] A) 90
- [ ] B) 91
- [ ] C) 92
- [ ] D) 27
- [ ] E) 12

---

64 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

4 (13) 9
5 (15) 10
2 (?) 5

- [ ] A) 12
- [ ] B) 20
- [ ] C) 8
- [ ] D) 7
- [ ] E) 6

---

65 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

11 (22) 11
7 (16) 5
8 (?) 2

- [ ] A) 21
- [ ] B) 12
- [ ] C) 30
- [ ] D) 23
- [ ] E) 22

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66 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

3 (3) 3
10 (11) 9
12 (?) 2

- [ ] A) 21
- [ ] B) 23
- [ ] C) 120
- [ ] D) 38
- [ ] E) 22

---

67 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

12 (24) 10
4 (8) 2
5 (?) 2

- [ ] A) 16
- [ ] B) 21
- [ ] C) 12
- [ ] D) 15
- [ ] E) 14

---

68 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

7 (31) 3
10 (87) 7
12 (?) 2

- [ ] A) 148
- [ ] B) 38
- [ ] C) 39
- [ ] D) 37
- [ ] E) 34

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69 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

12 (265) 11

8 (80) 4

9 (?) 3

- [ ] A) 90
- [ ] B) 91
- [ ] C) 12
- [ ] D) 89
- [ ] E) 24

---

70 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

7 (36) 11

5 (34) 12

12 (?) 5

- [ ] A) 37
- [ ] B) 33
- [ ] C) 34
- [ ] D) 41
- [ ] E) 35

---

71 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

9 (36) 9

3 (17) 8

11 (?) 3

- [ ] A) 37
- [ ] B) 14
- [ ] C) 24
- [ ] D) 36
- [ ] E) 35

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72 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

10 (40) 5
9 (18) 3
2 (?) 2

- [ ] A) 3
- [ ] B) 8
- [ ] C) 6
- [ ] D) 1
- [ ] E) 2

---

73 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

5 (16) 3
6 (34) 11
2 (?) 2

- [ ] A) 8
- [ ] B) 7
- [ ] C) 9
- [ ] D) 6
- [ ] E) 2

---

74 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

10 (90) 8
7 (77) 10
9 (?) 3

- [ ] A) 37
- [ ] B) 36
- [ ] C) 39
- [ ] D) 35
- [ ] E) 18

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75 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

5 (14) 9
6 (16) 10
11 (?) 8

- [ ] A) 18
- [ ] B) 107
- [ ] C) 185
- [ ] D) 19
- [ ] E) 20

---

76 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

12 (12) 2
11 (99) 10
7 (?) 6

- [ ] A) 35
- [ ] B) 34
- [ ] C) 26
- [ ] D) 23
- [ ] E) 36

---

77 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

6 (22) 10
9 (30) 12
4 (?) 3

- [ ] A) 5
- [ ] B) 7
- [ ] C) 10
- [ ] D) 12
- [ ] E) 11

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78 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

9 (11) 7
12 (12) 12
7 (?) 3

- [ ] A) 10
- [ ] B) 12
- [ ] C) 30
- [ ] D) 18
- [ ] E) 11

---

79 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

12 (4) 8
11 (7) 4
9 (?) 3

- [ ] A) 5
- [ ] B) 6
- [ ] C) 7
- [ ] D) 30
- [ ] E) 15

---

80 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

9 (89) 8
6 (62) 8
5 (?) 12

- [ ] A) 77
- [ ] B) 78
- [ ] C) 76
- [ ] D) 18
- [ ] E) 17

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81 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

5 (26) 11

11 (29) 8

3 (?) 8

- [ ] A) 16
- [ ] B) 21
- [ ] C) 1
- [ ] D) 20
- [ ] E) 22

---

82 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

2 (6) 3

4 (8) 2

3 (?) 10

- [ ] A) 19
- [ ] B) 31
- [ ] C) 29
- [ ] D) 33
- [ ] E) 30

---

83 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

6 (18) 6

4 (10) 2

7 (?) 11

- [ ] A) 128
- [ ] B) 25
- [ ] C) 26
- [ ] D) 95
- [ ] E) 24

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84 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

6 (10) 4
9 (15) 6
3 (?) 6

- [ ] A) 3
- [ ] B) 8
- [ ] C) 10
- [ ] D) 15
- [ ] E) 9

---

85 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

11 (98) 8
5 (70) 12
8 (?) 11

- [ ] A) 97
- [ ] B) 96
- [ ] C) 99
- [ ] D) 98
- [ ] E) 30

---

86 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

2 (12) 11
7 (14) 8
8 (?) 8

- [ ] A) 15
- [ ] B) 16
- [ ] C) 128
- [ ] D) 56
- [ ] E) 14

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87 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

11 (22) 3
10 (70) 8
9 (?) 5

- [ ] A) 36
- [ ] B) 50
- [ ] C) 35
- [ ] D) 45
- [ ] E) 37

---

88 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

12 (16) 5
7 (15) 9
6 (?) 6

- [ ] A) 13
- [ ] B) 11
- [ ] C) 12
- [ ] D) 42
- [ ] E) 10

---

89 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

9 (45) 6
6 (11) 5
12 (?) 4

- [ ] A) 140
- [ ] B) 129
- [ ] C) 32
- [ ] D) 127
- [ ] E) 128

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90 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

8 (15) 7
2 (10) 8
9 (?) 6

- [ ] A) 15
- [ ] B) 14
- [ ] C) 87
- [ ] D) 3
- [ ] E) 16

---

91 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

9 (63) 2
10 (40) 6
8 (?) 6

- [ ] A) 17
- [ ] B) 40
- [ ] C) 15
- [ ] D) 16
- [ ] E) 48

---

92 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

8 (27) 3
11 (72) 6
4 (?) 5

- [ ] A) 27
- [ ] B) 17
- [ ] C) 24
- [ ] D) 26
- [ ] E) 25

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93 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

9 (100) 10
8 (81) 9
3 (?) 7

- [ ] A) 27
- [ ] B) 28
- [ ] C) 29
- [ ] D) 20
- [ ] E) 16

---

94 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

11 (60) 6
8 (56) 8
9 (?) 9

- [ ] A) 71
- [ ] B) 18
- [ ] C) 73
- [ ] D) 72
- [ ] E) 162

---

95 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

2 (7) 6
3 (13) 11
12 (?) 6

- [ ] A) 17
- [ ] B) 180
- [ ] C) 54
- [ ] D) 18
- [ ] E) 16

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96 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

7 (24) 3

6 (56) 8

10 (?) 2

- [ ] A) 22
- [ ] B) 21
- [ ] C) 8
- [ ] D) 23
- [ ] E) 14

---

97 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

9 (225) 12

7 (170) 11

11 (?) 10

- [ ] A) 222
- [ ] B) 220
- [ ] C) 43
- [ ] D) 21
- [ ] E) 221

---

98 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

4 (9) 3

11 (50) 5

8 (?) 6

- [ ] A) 15
- [ ] B) 41
- [ ] C) 42
- [ ] D) 43
- [ ] E) 22

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99 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

7 (56) 4
8 (192) 12
6 (?) 6

- [ ] A) 71
- [ ] B) 73
- [ ] C) 24
- [ ] D) 72
- [ ] E) 30

---

100 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

8 (55) 3
11 (85) 6
6 (?) 3

- [ ] A) 39
- [ ] B) 27
- [ ] C) 45
- [ ] D) 28
- [ ] E) 26

---

101 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

7 (7) 6
4 (4) 3
8 (?) 4

- [ ] A) 33
- [ ] B) 24
- [ ] C) 32
- [ ] D) 44
- [ ] E) 31

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102 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

9 (64) 6

7 (52) 6

11 (?) 5

- [ ] A) 65
- [ ] B) 71
- [ ] C) 66
- [ ] D) 64
- [ ] E) 21

---

103 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

12 (136) 8

3 (7) 2

11 (?) 2

- [ ] A) 120
- [ ] B) 118
- [ ] C) 35
- [ ] D) 12
- [ ] E) 119

---

104 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

12 (154) 12

7 (52) 6

4 (?) 11

- [ ] A) 55
- [ ] B) 59
- [ ] C) 53
- [ ] D) 44
- [ ] E) 54

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105 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

12 (48) 4

7 (77) 11

5 (?) 6

- [ ] A) 41
- [ ] B) 30
- [ ] C) 29
- [ ] D) 16
- [ ] E) 31

---

106 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

6 (35) 5

10 (110) 10

2 (?) 12

- [ ] A) 35
- [ ] B) 18
- [ ] C) 37
- [ ] D) 34
- [ ] E) 36

---

107 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

7 (24) 5

5 (21) 2

11 (?) 5

- [ ] A) 97
- [ ] B) 66
- [ ] C) 96
- [ ] D) 95
- [ ] E) 110

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108 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

9 (80) 8

12 (65) 5

6 (?) 11

- [ ] A) 77
- [ ] B) 78
- [ ] C) 23
- [ ] D) 76
- [ ] E) 157

---

109 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

8 (112) 7

9 (198) 11

10 (?) 3

- [ ] A) 33
- [ ] B) 23
- [ ] C) 60
- [ ] D) 61
- [ ] E) 59

---

110 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

2 (20) 10

7 (77) 11

8 (?) 10

- [ ] A) 80
- [ ] B) 79
- [ ] C) 26
- [ ] D) 6
- [ ] E) 81

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111 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

9 (15) 3
3 (4) 2
5 (?) 5

- [ ] A) 9
- [ ] B) 5
- [ ] C) 4
- [ ] D) 11
- [ ] E) 6

---

112 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

7 (40) 3
9 (72) 3
6 (?) 5

- [ ] A) 31
- [ ] B) 10
- [ ] C) 41
- [ ] D) 12
- [ ] E) 11

---

113 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

9 (18) 9
7 (18) 3
11 (?) 6

- [ ] A) 26
- [ ] B) 27
- [ ] C) 28
- [ ] D) 127
- [ ] E) 132

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114 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

2 (14) 7

4 (48) 12

7 (?) 4

- [ ] A) 28
- [ ] B) 27
- [ ] C) 29
- [ ] D) 32
- [ ] E) 12

---

115 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

3 (31) 7

2 (11) 3

4 (?) 6

- [ ] A) 35
- [ ] B) 14
- [ ] C) 33
- [ ] D) 30
- [ ] E) 34

---

116 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

3 (9) 3

11 (77) 7

12 (?) 2

- [ ] A) 24
- [ ] B) 23
- [ ] C) 25
- [ ] D) 16
- [ ] E) 13

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117 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

10 (36) 6
7 (30) 9
9 (?) 4

- [ ] A) 85
- [ ] B) 45
- [ ] C) 30
- [ ] D) 32
- [ ] E) 31

---

118 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

2 (20) 9
9 (27) 2
11 (?) 3

- [ ] A) 44
- [ ] B) 30
- [ ] C) 20
- [ ] D) 43
- [ ] E) 45

---

119 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

10 (27) 3
11 (26) 7
6 (?) 4

- [ ] A) 2
- [ ] B) 14
- [ ] C) 24
- [ ] D) 13
- [ ] E) 15

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120 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

11 (28) 6
2 (13) 9
3 (?) 6

- [ ] A) 28
- [ ] B) 21
- [ ] C) 13
- [ ] D) 12
- [ ] E) 11

---

121 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

9 (12) 6
10 (15) 5
11 (?) 4

- [ ] A) 30
- [ ] B) 19
- [ ] C) 55
- [ ] D) 17
- [ ] E) 18

---

122 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

8 (61) 3
7 (47) 2
12 (?) 5

- [ ] A) 140
- [ ] B) 138
- [ ] C) 139
- [ ] D) 7
- [ ] E) 17

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123 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

7 (28) 3

12 (12) 11

8 (?) 5

- [ ] A) 24
- [ ] B) 23
- [ ] C) 25
- [ ] D) 35
- [ ] E) 89

---

124 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

3 (8) 5

6 (15) 9

2 (?) 10

- [ ] A) 18
- [ ] B) 13
- [ ] C) 11
- [ ] D) 12
- [ ] E) 10

---

125 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

10 (14) 2

3 (39) 6

11 (?) 2

- [ ] A) 15
- [ ] B) 16
- [ ] C) 14
- [ ] D) 119
- [ ] E) 33

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126 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

10 (11) 9
12 (22) 2
9 (?) 8

- [ ] A) 89
- [ ] B) 9
- [ ] C) 11
- [ ] D) 34
- [ ] E) 10

---

127 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

12 (120) 5
9 (108) 6
6 (?) 4

- [ ] A) 49
- [ ] B) 47
- [ ] C) 48
- [ ] D) 11
- [ ] E) 30

---

128 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

10 (30) 4
4 (8) 3
9 (?) 5

- [ ] A) 35
- [ ] B) 36
- [ ] C) 23
- [ ] D) 37
- [ ] E) 59

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129 10 (18) 4
13 (?) 5

- [ ] A) 54
- [ ] B) 8
- [ ] C) -24
- [ ] D) 24
- [ ] E) 16

---

130 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

5 (5) 4
7 (7) 6
12 (?) 8

- [ ] A) 48
- [ ] B) 60
- [ ] C) 47
- [ ] D) 49
- [ ] E) 108

---

131 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

5 (42) 7
9 (20) 2
6 (?) 5

- [ ] A) 36
- [ ] B) 31
- [ ] C) 41
- [ ] D) 34
- [ ] E) 35

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132 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

12 (152) 8

4 (21) 5

6 (?) 12

- [ ] A) 49
- [ ] B) 72
- [ ] C) 60
- [ ] D) 48
- [ ] E) 47

---

133 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

3 (10) 7

5 (12) 7

9 (?) 7

- [ ] A) 32
- [ ] B) 16
- [ ] C) 15
- [ ] D) 17
- [ ] E) 130

---

134 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

11 (14) 3

6 (10) 4

5 (?) 5

- [ ] A) 11
- [ ] B) 20
- [ ] C) 30
- [ ] D) 9
- [ ] E) 10

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135 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

8 (51) 9

10 (48) 6

7 (?) 12

- [ ] A) 58
- [ ] B) 56
- [ ] C) 57
- [ ] D) 151
- [ ] E) 18

---

136 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

6 (18) 4

5 (10) 3

11 (?) 3

- [ ] A) 22
- [ ] B) 19
- [ ] C) 23
- [ ] D) 21
- [ ] E) 124

---

137 4 (8) 3

5 (?) 6

- [ ] A) 6
- [ ] B) 30
- [ ] C) 25
- [ ] D) 11
- [ ] E) 24

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138 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

9 (4) 5
10 (6) 4
11 (?) 7

- [ ] A) 66
- [ ] B) 3
- [ ] C) 54
- [ ] D) 4
- [ ] E) 5

---

139 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

5 (25) 4
4 (40) 9
3 (?) 9

- [ ] A) 36
- [ ] B) 29
- [ ] C) 31
- [ ] D) 12
- [ ] E) 30

---

140 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

12 (22) 2
11 (60) 6
10 (?) 2

- [ ] A) 18
- [ ] B) 22
- [ ] C) 98
- [ ] D) 19
- [ ] E) 17

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141 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

10 (1) 9
9 (3) 6
5 (?) 4

- [ ] A) 1
- [ ] B) 10
- [ ] C) 14
- [ ] D) 0
- [ ] E) 2

---

142 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

11 (40) 9
10 (84) 4
12 (?) 3

- [ ] A) 134
- [ ] B) 33
- [ ] C) 135
- [ ] D) 39
- [ ] E) 136

---

143 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

4 (20) 5
5 (60) 12
7 (?) 4

- [ ] A) 29
- [ ] B) 21
- [ ] C) 3
- [ ] D) 28
- [ ] E) 27

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144 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

7 (38) 4
5 (50) 8
12 (?) 5

- [ ] A) 69
- [ ] B) 70
- [ ] C) 19
- [ ] D) 17
- [ ] E) 71

---

145 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

7 (58) 3
8 (100) 6
5 (?) 11

- [ ] A) 71
- [ ] B) 147
- [ ] C) 145
- [ ] D) 21
- [ ] E) 146

---

146 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

6 (7) 5
5 (7) 3
10 (?) 3

- [ ] A) 18
- [ ] B) 16
- [ ] C) 17
- [ ] D) 97
- [ ] E) 20

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147 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

6 (12) 5
4 (7) 2
9 (?) 5

- [ ] A) 36
- [ ] B) 15
- [ ] C) 56
- [ ] D) 16
- [ ] E) 14

---

148 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

9 (16) 2
4 (6) 2
6 (?) 2

- [ ] A) 11
- [ ] B) 12
- [ ] C) 9
- [ ] D) 10
- [ ] E) 40

---

149 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

5 (12) 3
2 (4) 2
9 (?) 9

- [ ] A) 18
- [ ] B) 17
- [ ] C) 19
- [ ] D) 90
- [ ] E) 36

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150 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

8 (16) 8

2 (13) 11

3 (?) 9

- [ ] A) 11
- [ ] B) 15
- [ ] C) 13
- [ ] D) 12
- [ ] E) 30

---

151 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

10 (32) 12

11 (26) 5

4 (?) 2

- [ ] A) 16
- [ ] B) 17
- [ ] C) 6
- [ ] D) 12
- [ ] E) 15

---

152 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

10 (7) 3

12 (6) 6

9 (?) 8

- [ ] A) 89
- [ ] B) 145
- [ ] C) 2
- [ ] D) 0
- [ ] E) 1

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153 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

5 (10) 3

11 (33) 4

10 (?) 4

- [ ] A) 29
- [ ] B) 50
- [ ] C) 30
- [ ] D) 26
- [ ] E) 31

---

154 The numbers in the brackets are linked to the numbers outside by the same rule each time. Find the missing number.

7 (24) 4

12 (88) 8

10 (?) 7

- [ ] A) 64
- [ ] B) 62
- [ ] C) 63
- [ ] D) 93
- [ ] E) 77

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Mark scheme · 3.18 Number Connections: 2-hour Pack

Question 1

E) 57 - rule: subtract the square of the second number from the square of the first; for 11 and 8 this gives 57 **B1**

Answer: E) 57

Question 2

A) 30 - rule: multiply the two numbers then add the second; for 9 and 3 this gives 30 **B1**

Answer: A) 30

Question 3

E) 6 - rule: subtract the second outer number from the first; for 9 and 3 this gives 6 **B1**

Answer: E) 6

Question 4

D) 9 - rule: double the second number and add it to the first; for 5 and 2 this gives 9 **B1**

Answer: D) 9

Question 5

C) 24 - rule: add the two numbers then multiply by 3; for 2 and 6 this gives 24 **B1**

Answer: C) 24

Question 6

C) 69 - rule is (subtract, multiply by the sum, then add the second number back): (7 - 3) x (7 + 3) + 3 = 43, so (9 - 4) x (9 + 4) + 4 = 69 **B1**

Answer: 69

Question 7

A) 33 - rule: multiply the two outer numbers; for 11 and 3 this gives 33 **B1**

Answer: A) 33

Question 8

E) 10 - rule: double the first number and subtract the second; for 8 and 6 this gives 10 **B1**

Answer: E) 10

Question 9

C) 90 - rule: multiply the two numbers then subtract the first; for 10 and 10 this gives 90 **B1**

Answer: C) 90

Question 10

D) 15 - rule: double the first number and subtract the second; for 10 and 5 this gives 15 **B1**

Answer: D) 15

Question 11

B) 2 - rule: subtract the second outer number from the first; for 4 and 2 this gives 2 **B1**

Answer: B) 2

Question 12

A) 36 - rule: add the two numbers then multiply by 3; for 10 and 2 this gives 36 **B1**

Answer: A) 36

Question 13

C) 17 - rule: add the two numbers then add 1; for 12 and 4 this gives 17 **B1**

Answer: C) 17

Question 14

B) 18 - rule: add the two numbers then add 10; for 2 and 6 this gives 18 **B1**

Answer: B) 18

Question 15

A) 26 - rule: double the first number and add the second; for 11 and 4 this gives 26 **B1**

Answer: A) 26

Question 16

D) 48 - rule: multiply the first by 3 then add the second; for 12 and 12 this gives 48 **B1**

Answer: D) 48

Question 17

B) 8 - rule: add the two outer numbers; for 2 and 6 this gives 8 **B1**

Answer: B) 8

Question 18

D) 37 - rule: square the first number and add the second; for 5 and 12 this gives 37 **B1**

Answer: D) 37

Question 19

C) 70 - rule: multiply the two outer numbers; for 7 and 10 this gives 70 **B1**

Answer: C) 70

Question 20

A) 16 - rule: multiply the first by 3 then add the second; for 4 and 4 this gives 16 **B1**

Answer: A) 16

Question 21

D) 18 - rule: add the two outer numbers; for 9 and 9 this gives 18 **B1**

Answer: D) 18

Question 22

C) 37 - rule: multiply the first by 3 then add the second; for 10 and 7 this gives 37 **B1**

Answer: C) 37

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Question 23

B) 26 - rule: square the second number and add the first; for 10 and 4 this gives 26 **B1**

Answer: B) 26

Question 24

E) 27 - rule: add the two numbers then multiply by 3; for 2 and 7 this gives 27 **B1**

Answer: E) 27

Question 25

A) 108 - rule: multiply the two numbers then double; for 6 and 9 this gives 108 **B1**

Answer: A) 108

Question 26

A) 22 - rule: multiply the two numbers then subtract the first; for 11 and 3 this gives 22 **B1**

Answer: A) 22

Question 27

C) 45 - rule: square the first number and subtract the second; for 7 and 4 this gives 45 **B1**

Answer: C) 45

Question 28

E) 14 - rule: add the two numbers then subtract 1; for 8 and 7 this gives 14 **B1**

Answer: E) 14

Question 29

D) 29 - rule: multiply, then add both numbers; for 9 and 2 this gives 29 **B1**

Answer: D) 29

Question 30

E) 34 - rule: multiply then add 10; for 2 and 12 this gives 34 **B1**

Answer: E) 34

Question 31

A) 28 - rule: multiply the first by 3 then add the second; for 7 and 7 this gives 28 **B1**

Answer: A) 28

Question 32

C) 74 - rule: add the squares of the two numbers; for 7 and 5 this gives 74 **B1**

Answer: C) 74

Question 33

D) 128 - rule: subtract the square of the second number from the square of the first; for 12 and 4 this gives 128 **B1**

Answer: D) 128

Question 34

D) 27 - rule: add the two numbers then add 10; for 6 and 11 this gives 27 **B1**

Answer: D) 27

Question 35

D) 14 - rule: add the two numbers then subtract 1; for 7 and 8 this gives 14 **B1**

Answer: D) 14

Question 36

B) 14 - rule: double the first number and subtract the second; for 11 and 8 this gives 14 **B1**

Answer: B) 14

Question 37

A) 88 - rule: multiply the two numbers then add the second; for 7 and 11 this gives 88 **B1**

Answer: A) 88

Question 38

C) 18 - rule: double the first number and add the second; for 4 and 10 this gives 18 **B1**

Answer: C) 18

Question 39

A) 20 - rule: add the two numbers then subtract 1; for 11 and 10 this gives 20 **B1**

Answer: A) 20

Question 40

D) 8 - rule: multiply the two numbers then subtract the second; for 5 and 2 this gives 8 **B1**

Answer: D) 8

Question 41

B) 42 - rule: multiply then add 10; for 4 and 8 this gives 42 **B1**

Answer: B) 42

Question 42

A) 63 - rule: multiply the two numbers then add the second; for 6 and 9 this gives 63 **B1**

Answer: A) 63

Question 43

E) 18 - rule: add the two numbers then subtract 1; for 7 and 12 this gives 18 **B1**

Answer: E) 18

Question 44

B) 130 - rule: square the first number and add the second; for 11 and 9 this gives 130 **B1**

Answer: B) 130

Question 45

A) 51 - rule: add the two numbers then multiply by 3; for 10 and 7 this gives 51 **B1**

Answer: A) 51

Question 46

D) 16 - rule: add the two numbers then double; for 2 and 6 this gives 16 **B1**

Answer: D) 16

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Question 47

C) 47 - rule: multiply, then add both numbers; for 3 and 11 this gives 47 **B1**

Answer: C) 47

Question 48

C) 15 - rule: multiply the two numbers then subtract the second; for 6 and 3 this gives 15 **B1**

Answer: C) 15

Question 49

A) 15 - rule: add the two outer numbers; for 3 and 12 this gives 15 **B1**

Answer: A) 15

Question 50

B) 42 - rule: multiply the two numbers then add the second; for 6 and 6 this gives 42 **B1**

Answer: B) 42

Question 51

A) 22 - rule: add the two outer numbers; for 11 and 11 this gives 22 **B1**

Answer: A) 22

Question 52

D) 99 - rule: multiply the two numbers then subtract the second; for 12 and 9 this gives 99 **B1**

Answer: D) 99

Question 53

C) 22 - rule: add the two numbers then add 1; for 10 and 11 this gives 22 **B1**

Answer: C) 22

Question 54

A) 59 - rule: multiply, then add both numbers; for 11 and 4 this gives 59 **B1**

Answer: A) 59

Question 55

D) 1 - rule: subtract the second outer number from the first; for 3 and 2 this gives 1 **B1**

Answer: D) 1

Question 56

E) 45 - rule: add the two numbers then multiply by 3; for 7 and 8 this gives 45 **B1**

Answer: E) 45

Question 57

A) 30 - rule: add the two numbers then add 10; for 8 and 12 this gives 30 **B1**

Answer: A) 30

Question 58

B) 15 - rule: multiply the two numbers then add the second; for 2 and 5 this gives 15 **B1**

Answer: B) 15

Question 59

C) 66 - rule: multiply the two numbers then add the second; for 5 and 11 this gives 66 **B1**

Answer: C) 66

Question 60

E) 54 - rule: multiply the two numbers then add the first; for 6 and 8 this gives 54 **B1**

Answer: E) 54

Question 61

D) 80 - rule: multiply the two numbers then double; for 4 and 10 this gives 80 **B1**

Answer: D) 80

Question 62

A) 12 - rule: multiply the two numbers then add the first; for 3 and 3 this gives 12 **B1**

Answer: A) 12

Question 63

B) 91 - rule: multiply the sum by the difference; for 10 and 3 this gives 91 **B1**

Answer: B) 91

Question 64

D) 7 - rule: add the two outer numbers; for 2 and 5 this gives 7 **B1**

Answer: D) 7

Question 65

E) 22 - rule: multiply the first by 3 then subtract the second; for 8 and 2 this gives 22 **B1**

Answer: E) 22

Question 66

E) 22 - rule: double the first number and subtract the second; for 12 and 2 this gives 22 **B1**

Answer: E) 22

Question 67

D) 15 - rule: subtract then multiply by the first number; for 5 and 2 this gives 15 **B1**

Answer: D) 15

Question 68

B) 38 - rule: multiply, then add both numbers; for 12 and 2 this gives 38 **B1**

Answer: B) 38

Question 69

A) 90 - rule: add the squares of the two numbers; for 9 and 3 this gives 90 **B1**

Answer: A) 90

Question 70

C) 34 - rule: add the two numbers then double; for 12 and 5 this gives 34 **B1**

Answer: C) 34

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Question 71

D) 36 - rule: multiply the first by 3 then add the second; for 11 and 3 this gives 36 **B1**

Answer: D) 36

Question 72

E) 2 - rule: multiply the two numbers then subtract the first; for 2 and 2 this gives 2 **B1**

Answer: E) 2

Question 73

A) 8 - rule: add the two numbers then double; for 2 and 2 this gives 8 **B1**

Answer: A) 8

Question 74

B) 36 - rule: multiply the two numbers then add the first; for 9 and 3 this gives 36 **B1**

Answer: B) 36

Question 75

D) 19 - rule: add the two outer numbers; for 11 and 8 this gives 19 **B1**

Answer: D) 19

Question 76

A) 35 - rule: multiply the two numbers then subtract the first; for 7 and 6 this gives 35 **B1**

Answer: A) 35

Question 77

E) 11 - rule: double the first number and add the second; for 4 and 3 this gives 11 **B1**

Answer: E) 11

Question 78

E) 11 - rule: double the first number and subtract the second; for 7 and 3 this gives 11 **B1**

Answer: E) 11

Question 79

B) 6 - rule: subtract the second outer number from the first; for 9 and 3 this gives 6 **B1**

Answer: B) 6

Question 80

A) 77 - rule: multiply, then add both numbers; for 5 and 12 this gives 77 **B1**

Answer: A) 77

Question 81

B) 21 - rule: add the two numbers then add 10; for 3 and 8 this gives 21 **B1**

Answer: B) 21

Question 82

E) 30 - rule: multiply the two outer numbers; for 3 and 10 this gives 30 **B1**

Answer: E) 30

Question 83

B) 25 - rule: double the first number and add the second; for 7 and 11 this gives 25 **B1**

Answer: B) 25

Question 84

E) 9 - rule: add the two outer numbers; for 3 and 6 this gives 9 **B1**

Answer: E) 9

Question 85

D) 98 - rule: multiply then add 10; for 8 and 11 this gives 98 **B1**

Answer: D) 98

Question 86

A) 15 - rule: add the two numbers then subtract 1; for 8 and 8 this gives 15 **B1**

Answer: A) 15

Question 87

A) 36 - rule: multiply the two numbers then subtract the first; for 9 and 5 this gives 36 **B1**

Answer: A) 36

Question 88

B) 11 - rule: add the two numbers then subtract 1; for 6 and 6 this gives 11 **B1**

Answer: B) 11

Question 89

E) 128 - rule: multiply the sum by the difference; for 12 and 4 this gives 128 **B1**

Answer: E) 128

Question 90

A) 15 - rule: add the two outer numbers; for 9 and 6 this gives 15 **B1**

Answer: A) 15

Question 91

D) 16 - rule: subtract then multiply by the first number; for 8 and 6 this gives 16 **B1**

Answer: D) 16

Question 92

E) 25 - rule: multiply the two numbers then add the second; for 4 and 5 this gives 25 **B1**

Answer: E) 25

Question 93

B) 28 - rule: multiply the two numbers then add the second; for 3 and 7 this gives 28 **B1**

Answer: B) 28

Question 94

D) 72 - rule: multiply the two numbers then subtract the second; for 9 and 9 this gives 72 **B1**

Answer: D) 72

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Question 95

A) 17 - rule: add the two numbers then subtract 1; for 12 and 6 this gives 17 **B1**

Answer: A) 17

Question 96

A) 22 - rule: multiply the two numbers then add the second; for 10 and 2 this gives 22 **B1**

Answer: A) 22

Question 97

E) 221 - rule: add the squares of the two numbers; for 11 and 10 this gives 221 **B1**

Answer: E) 221

Question 98

C) 42 - rule: multiply the two numbers then subtract the second; for 8 and 6 this gives 42 **B1**

Answer: C) 42

Question 99

D) 72 - rule: multiply the two numbers then double; for 6 and 6 this gives 72 **B1**

Answer: D) 72

Question 100

B) 27 - rule: multiply the sum by the difference; for 6 and 3 this gives 27 **B1**

Answer: B) 27

Question 101

C) 32 - rule: subtract then multiply by the first number; for 8 and 4 this gives 32 **B1**

Answer: C) 32

Question 102

A) 65 - rule: multiply then add 10; for 11 and 5 this gives 65 **B1**

Answer: A) 65

Question 103

E) 119 - rule: square the first number and subtract the second; for 11 and 2 this gives 119 **B1**

Answer: E) 119

Question 104

E) 54 - rule: multiply then add 10; for 4 and 11 this gives 54 **B1**

Answer: E) 54

Question 105

B) 30 - rule: multiply the two outer numbers; for 5 and 6 this gives 30 **B1**

Answer: B) 30

Question 106

E) 36 - rule: multiply the two numbers then add the second; for 2 and 12 this gives 36 **B1**

Answer: E) 36

Question 107

C) 96 - rule: subtract the square of the second number from the square of the first; for 11 and 5 this gives 96 **B1**

Answer: C) 96

Question 108

A) 77 - rule: multiply the two numbers then add the second; for 6 and 11 this gives 77 **B1**

Answer: A) 77

Question 109

C) 60 - rule: multiply the two numbers then double; for 10 and 3 this gives 60 **B1**

Answer: C) 60

Question 110

A) 80 - rule: multiply the two outer numbers; for 8 and 10 this gives 80 **B1**

Answer: A) 80

Question 111

B) 5 - rule: double the first number and subtract the second; for 5 and 5 this gives 5 **B1**

Answer: B) 5

Question 112

E) 11 - rule: multiply the sum by the difference; for 6 and 5 this gives 11 **B1**

Answer: E) 11

Question 113

B) 27 - rule: multiply the first by 3 then subtract the second; for 11 and 6 this gives 27 **B1**

Answer: B) 27

Question 114

A) 28 - rule: multiply the two outer numbers; for 7 and 4 this gives 28 **B1**

Answer: A) 28

Question 115

E) 34 - rule: multiply, then add both numbers; for 4 and 6 this gives 34 **B1**

Answer: E) 34

Question 116

A) 24 - rule: multiply the two outer numbers; for 12 and 2 this gives 24 **B1**

Answer: A) 24

Question 117

E) 31 - rule: multiply the first by 3 then add the second; for 9 and 4 this gives 31 **B1**

Answer: E) 31

Question 118

A) 44 - rule: multiply the two numbers then add the first; for 11 and 3 this gives 44 **B1**

Answer: A) 44

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Question 119

B) 14 - rule: multiply the first by 3 then subtract the second; for 6 and 4 this gives 14 **B1**

Answer: B) 14

Question 120

D) 12 - rule: double the first number and add the second; for 3 and 6 this gives 12 **B1**

Answer: D) 12

Question 121

E) 18 - rule: double the first number and subtract the second; for 11 and 4 this gives 18 **B1**

Answer: E) 18

Question 122

C) 139 - rule: square the first number and subtract the second; for 12 and 5 this gives 139 **B1**

Answer: C) 139

Question 123

A) 24 - rule: subtract then multiply by the first number; for 8 and 5 this gives 24 **B1**

Answer: A) 24

Question 124

D) 12 - rule: add the two outer numbers; for 2 and 10 this gives 12 **B1**

Answer: D) 12

Question 125

A) 15 - rule: square the second number and add the first; for 11 and 2 this gives 15 **B1**

Answer: A) 15

Question 126

E) 10 - rule: double the first number and subtract the second; for 9 and 8 this gives 10 **B1**

Answer: E) 10

Question 127

C) 48 - rule: multiply the two numbers then double; for 6 and 4 this gives 48 **B1**

Answer: C) 48

Question 128

B) 36 - rule: multiply the two numbers then subtract the first; for 9 and 5 this gives 36 **B1**

Answer: B) 36

Question 129

D) 24 - rule is (subtract, then multiply by 3): (10 - 4) x 3 = 18, so (13 - 5) x 3 = 24 **B1**

Answer: 24

Question 130

A) 48 - rule: subtract then multiply by the first number; for 12 and 8 this gives 48 **B1**

Answer: A) 48

Question 131

E) 35 - rule: multiply the two numbers then add the second; for 6 and 5 this gives 35 **B1**

Answer: E) 35

Question 132

D) 48 - rule: square the first number and add the second; for 6 and 12 this gives 48 **B1**

Answer: D) 48

Question 133

B) 16 - rule: add the two outer numbers; for 9 and 7 this gives 16 **B1**

Answer: B) 16

Question 134

E) 10 - rule: add the two outer numbers; for 5 and 5 this gives 10 **B1**

Answer: E) 10

Question 135

C) 57 - rule: add the two numbers then multiply by 3; for 7 and 12 this gives 57 **B1**

Answer: C) 57

Question 136

A) 22 - rule: multiply the two numbers then subtract the first; for 11 and 3 this gives 22 **B1**

Answer: A) 22

Question 137

C) 25 - rule is (multiply, then subtract the first number): (4 x 3) - 4 = 8, so (5 x 6) - 5 = 25 **B1**

Answer: 25

Question 138

D) 4 - rule: subtract the second outer number from the first; for 11 and 7 this gives 4 **B1**

Answer: D) 4

Question 139

E) 30 - rule: multiply the two numbers then add the first; for 3 and 9 this gives 30 **B1**

Answer: E) 30

Question 140

A) 18 - rule: multiply the two numbers then subtract the second; for 10 and 2 this gives 18 **B1**

Answer: A) 18

Question 141

A) 1 - rule: subtract the second outer number from the first; for 5 and 4 this gives 1 **B1**

Answer: A) 1

Question 142

C) 135 - rule: multiply the sum by the difference; for 12 and 3 this gives 135 **B1**

Answer: C) 135

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Question 143

D) 28 - rule: multiply the two outer numbers; for 7 and 4 this gives 28 **B1**

Answer: D) 28

Question 144

B) 70 - rule: multiply then add 10; for 12 and 5 this gives 70 **B1**

Answer: B) 70

Question 145

E) 146 - rule: add the squares of the two numbers; for 5 and 11 this gives 146 **B1**

Answer: E) 146

Question 146

C) 17 - rule: double the first number and subtract the second; for 10 and 3 this gives 17 **B1**

Answer: C) 17

Question 147

B) 15 - rule: add the two numbers then add 1; for 9 and 5 this gives 15 **B1**

Answer: B) 15

Question 148

D) 10 - rule: multiply the two numbers then subtract the second; for 6 and 2 this gives 10 **B1**

Answer: D) 10

Question 149

A) 18 - rule: multiply the first by 3 then subtract the second; for 9 and 9 this gives 18 **B1**

Answer: A) 18

Question 150

D) 12 - rule: add the two outer numbers; for 3 and 9 this gives 12 **B1**

Answer: D) 12

Question 151

A) 16 - rule: add the two numbers then add 10; for 4 and 2 this gives 16 **B1**

Answer: A) 16

Question 152

E) 1 - rule: subtract the second outer number from the first; for 9 and 8 this gives 1 **B1**

Answer: E) 1

Question 153

C) 30 - rule: multiply the two numbers then subtract the first; for 10 and 4 this gives 30 **B1**

Answer: C) 30

Question 154

C) 63 - rule: multiply the two numbers then subtract the second; for 10 and 7 this gives 63 **B1**

Answer: C) 63

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