3.18 Number Connections: Test Pack

GL ASSESSMENT GL-VR-11+ · about 60 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 5 (12) 7
9 (?) 6

- ☐ A) 3
- ☐ B) 54
- ☐ C) 1.5
- ☐ D) 16
- ☐ E) 15

---

2 3 (16) 5
6 (?) 4

- ☐ A) 10
- ☐ B) 4
- ☐ C) 20
- ☐ D) 48
- ☐ E) 16

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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.

11 (24) 3
8 (24) 6
9 (?) 6

- [ ] A) 14
- [ ] B) 60
- [ ] C) 24
- [ ] D) 25
- [ ] E) 27

---

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

3 (5) 2
9 (19) 10
4 (?) 4

- [ ] A) 26
- [ ] B) 7
- [ ] C) 24
- [ ] D) 8
- [ ] E) 9

---

5 4 (12) 6
5 (?) 8

- [ ] A) 6.5
- [ ] B) 40
- [ ] C) 80
- [ ] D) 20
- [ ] E) 1.5

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

10 (22) 8

5 (11) 4

8 (?) 3

- [ ] A) 22
- [ ] B) 34
- [ ] C) 21
- [ ] D) 61
- [ ] E) 20

---

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

9 (30) 6

3 (28) 11

10 (?) 10

- [ ] A) 39
- [ ] B) 10
- [ ] C) 110
- [ ] D) 41
- [ ] E) 40

---

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

9 (27) 3

10 (110) 11

8 (?) 10

- [ ] A) 80
- [ ] B) 79
- [ ] C) 108
- [ ] D) 81
- [ ] E) 72

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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.

11 (123) 2

9 (83) 2

5 (?) 10

- [ ] A) 34
- [ ] B) 36
- [ ] C) 15
- [ ] D) 105
- [ ] E) 35

---

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

11 (29) 7

9 (20) 2

4 (?) 7

- [ ] A) 15
- [ ] B) 16
- [ ] C) 10
- [ ] D) 14
- [ ] E) 19

---

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

11 (112) 3

12 (95) 7

6 (?) 3

- [ ] A) 27
- [ ] B) 36
- [ ] C) 8
- [ ] D) 28
- [ ] E) 26

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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.

9 (36) 5

6 (12) 4

12 (?) 6

- [ ] A) 71
- [ ] B) 48
- [ ] C) 72
- [ ] D) 73
- [ ] E) 108

---

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

11 (5) 6

4 (2) 2

8 (?) 4

- [ ] A) 3
- [ ] B) 12
- [ ] C) 28
- [ ] D) 5
- [ ] E) 4

---

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

10 (100) 9

5 (20) 2

3 (?) 7

- [ ] A) 30
- [ ] B) 32
- [ ] C) 11
- [ ] D) 31
- [ ] E) 52

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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.

2 (18) 7

9 (42) 12

10 (?) 9

- [ ] A) 39
- [ ] B) 38
- [ ] C) 1
- [ ] D) 181
- [ ] E) 37

---

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

4 (18) 6

11 (42) 9

6 (?) 11

- [ ] A) 60
- [ ] B) 28
- [ ] C) 34
- [ ] D) 29
- [ ] E) 30

---

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

6 (30) 9

2 (24) 10

3 (?) 11

- [ ] A) 33
- [ ] B) 29
- [ ] C) 27
- [ ] D) 24
- [ ] E) 28

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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.

7 (43) 6

6 (127) 11

12 (?) 8

- [ ] A) 76
- [ ] B) 192
- [ ] C) 75
- [ ] D) 77
- [ ] E) 19

---

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

11 (11) 10

6 (12) 4

7 (?) 2

- [ ] A) 47
- [ ] B) 36
- [ ] C) 45
- [ ] D) 34
- [ ] E) 35

---

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

4 (18) 2

8 (76) 12

3 (?) 6

- [ ] A) 12
- [ ] B) 16
- [ ] C) 15
- [ ] D) 3
- [ ] E) 14

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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.

7 (19) 5

3 (11) 5

9 (?) 7

- [ ] A) 24
- [ ] B) 26
- [ ] C) 48
- [ ] D) 73
- [ ] E) 25

---

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

2 (5) 2

6 (11) 4

8 (?) 9

- [ ] A) 19
- [ ] B) 18
- [ ] C) 82
- [ ] D) 17
- [ ] E) 25

---

23 8 (8) 4

6 (?) 3

- [ ] A) 18
- [ ] B) 0.17
- [ ] C) 2
- [ ] D) 6
- [ ] E) 15

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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.

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

- [ ] A) 2
- [ ] B) 0
- [ ] C) 39
- [ ] D) 109
- [ ] E) 1

---

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

7 (28) 3
10 (10) 9
11 (?) 7

- [ ] A) 44
- [ ] B) 77
- [ ] C) 84
- [ ] D) 43
- [ ] E) 45

---

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

3 (14) 12
5 (12) 8
8 (?) 4

- [ ] A) 11
- [ ] B) 16
- [ ] C) 12
- [ ] D) 60
- [ ] E) 10

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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.

3 (25) 11
2 (22) 10
12 (?) 4

- [ ] A) 19
- [ ] B) 20
- [ ] C) 96
- [ ] D) 21
- [ ] E) 26

---

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

9 (22) 5
4 (10) 2
7 (?) 3

- [ ] A) 18
- [ ] B) 16
- [ ] C) 17
- [ ] D) 19
- [ ] E) 58

---

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

9 (89) 8
10 (106) 6
5 (?) 10

- [ ] A) 50
- [ ] B) 36
- [ ] C) 34
- [ ] D) 35
- [ ] E) 20

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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 (55) 6

10 (70) 3

9 (?) 3

- [ ] A) 53
- [ ] B) 78
- [ ] C) 55
- [ ] D) 27
- [ ] E) 54

---

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

9 (54) 6

8 (72) 9

7 (?) 5

- [ ] A) 36
- [ ] B) 35
- [ ] C) 19
- [ ] D) 34
- [ ] E) 24

---

32 6 (4) 4

9 (?) 5

- [ ] A) 62
- [ ] B) 17
- [ ] C) 76
- [ ] D) -17
- [ ] E) 31

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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.

4 (22) 9
7 (11) 2
9 (?) 2

- [ ] A) 16
- [ ] B) 9
- [ ] C) 12
- [ ] D) 14
- [ ] E) 13

---

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

10 (13) 7
11 (19) 3
6 (?) 3

- [ ] A) 27
- [ ] B) 8
- [ ] C) 12
- [ ] D) 10
- [ ] E) 9

---

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

7 (16) 9
9 (14) 5
4 (?) 11

- [ ] A) 137
- [ ] B) 14
- [ ] C) 15
- [ ] D) 26
- [ ] E) 16

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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.

9 (24) 3
10 (21) 9
11 (?) 9

- [ ] A) 25
- [ ] B) 24
- [ ] C) 108
- [ ] D) 40
- [ ] E) 23

---

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

5 (61) 6
8 (100) 6
12 (?) 8

- [ ] A) 208
- [ ] B) 209
- [ ] C) 28
- [ ] D) 4
- [ ] E) 207

---

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

12 (137) 7
7 (45) 4
5 (?) 4

- [ ] A) 20
- [ ] B) 30
- [ ] C) 13
- [ ] D) 22
- [ ] E) 21

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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.

12 (154) 12

10 (50) 4

6 (?) 9

- [ ] A) 108
- [ ] B) 45
- [ ] C) 65
- [ ] D) 63
- [ ] E) 64

---

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

12 (38) 7

5 (18) 4

11 (?) 2

- [ ] A) 20
- [ ] B) 25
- [ ] C) 14
- [ ] D) 27
- [ ] E) 26

---

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

6 (20) 4

3 (24) 11

10 (?) 2

- [ ] A) 23
- [ ] B) 22
- [ ] C) 21
- [ ] D) 102
- [ ] E) 96

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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 (11) 5
3 (12) 8
7 (?) 10

- [ ] A) 80
- [ ] B) 18
- [ ] C) 19
- [ ] D) 17
- [ ] E) 140

---

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

5 (14) 9
9 (17) 8
6 (?) 2

- [ ] A) 7
- [ ] B) 14
- [ ] C) 34
- [ ] D) 9
- [ ] E) 8

---

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

9 (32) 7
12 (140) 2
6 (?) 5

- [ ] A) 10
- [ ] B) 12
- [ ] C) 11
- [ ] D) 16
- [ ] E) 7

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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 (21) 4
8 (48) 7
3 (?) 2

- [ ] A) 11
- [ ] B) 15
- [ ] C) 2
- [ ] D) 4
- [ ] E) 3

---

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

6 (41) 5
12 (103) 7
9 (?) 7

- [ ] A) 80
- [ ] B) 2
- [ ] C) 73
- [ ] D) 78
- [ ] E) 79

---

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

5 (26) 11
9 (25) 6
12 (?) 8

- [ ] A) 31
- [ ] B) 30
- [ ] C) 29
- [ ] D) 19
- [ ] E) 106

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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.

11 (77) 7

8 (88) 11

5 (?) 11

- [ ] A) 66
- [ ] B) 54
- [ ] C) 50
- [ ] D) 56
- [ ] E) 55

---

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

4 (6) 2

5 (7) 3

7 (?) 5

- [ ] A) 10
- [ ] B) 28
- [ ] C) 9
- [ ] D) 8
- [ ] E) 11

---

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

8 (17) 10

5 (15) 11

7 (?) 7

- [ ] A) 13
- [ ] B) 12
- [ ] C) 28
- [ ] D) 63
- [ ] E) 14

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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.

12 (36) 2

3 (39) 12

11 (?) 2

- [ ] A) 32
- [ ] B) 125
- [ ] C) 33
- [ ] D) 34
- [ ] E) 15

---

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

9 (63) 8

6 (6) 2

7 (?) 5

- [ ] A) 54
- [ ] B) 27
- [ ] C) 28
- [ ] D) 29
- [ ] E) 45

---

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

6 (30) 4

11 (66) 5

4 (?) 8

- [ ] A) 37
- [ ] B) 28
- [ ] C) 36
- [ ] D) 13
- [ ] E) 35

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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.

4 (29) 5

8 (57) 7

7 (?) 12

- [ ] A) 152
- [ ] B) 77
- [ ] C) 33
- [ ] D) 151
- [ ] E) 150

---

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

9 (77) 4

11 (119) 2

8 (?) 5

- [ ] A) 58
- [ ] B) 11
- [ ] C) 59
- [ ] D) 60
- [ ] E) 18

---

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

3 (15) 6

4 (18) 7

9 (?) 8

- [ ] A) 17
- [ ] B) 26
- [ ] C) 25
- [ ] D) 19
- [ ] E) 24

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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.

5 (25) 5

11 (44) 4

6 (?) 2

- [ ] A) 20
- [ ] B) 13
- [ ] C) 12
- [ ] D) 16
- [ ] E) 11

---

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

8 (60) 2

6 (20) 4

7 (?) 6

- [ ] A) 14
- [ ] B) 12
- [ ] C) 19
- [ ] D) 52
- [ ] E) 13

---

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

9 (16) 7

12 (24) 12

10 (?) 10

- [ ] A) 21
- [ ] B) 20
- [ ] C) 30
- [ ] D) 19
- [ ] E) 10

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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.

10 (20) 8

6 (12) 4

12 (?) 11

- [ ] A) 11
- [ ] B) 35
- [ ] C) 13
- [ ] D) 12
- [ ] E) 155

---

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

11 (2) 9

12 (7) 5

9 (?) 2

- [ ] A) 6
- [ ] B) 13
- [ ] C) 8
- [ ] D) 7
- [ ] E) 83

---

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

7 (66) 8

12 (142) 11

4 (?) 6

- [ ] A) 35
- [ ] B) 34
- [ ] C) 30
- [ ] D) 33
- [ ] E) 10

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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.

12 (2) 10

5 (1) 4

9 (?) 4

- [ ] A) 4
- [ ] B) 23
- [ ] C) 5
- [ ] D) 26
- [ ] E) 6

---

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

9 (32) 7

3 (14) 4

5 (?) 7

- [ ] A) 23
- [ ] B) 24
- [ ] C) 18
- [ ] D) 25
- [ ] E) 17

---

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

12 (18) 6

5 (6) 4

8 (?) 6

- [ ] A) 9
- [ ] B) 10
- [ ] C) 44
- [ ] D) 11
- [ ] E) 58

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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.

5 (15) 11
2 (3) 2
3 (?) 2

- [ ] A) 11
- [ ] B) 1
- [ ] C) 4
- [ ] D) 3
- [ ] E) 5

---

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

5 (12) 3
11 (40) 4
10 (?) 3

- [ ] A) 40
- [ ] B) 28
- [ ] C) 17
- [ ] D) 27
- [ ] E) 26

---

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

5 (23) 9
11 (17) 3
12 (?) 2

- [ ] A) 38
- [ ] B) 16
- [ ] C) 24
- [ ] D) 17
- [ ] E) 15

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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.

10 (19) 9

12 (63) 9

5 (?) 4

- [ ] A) 10
- [ ] B) 8
- [ ] C) 9
- [ ] D) 16
- [ ] E) 21

---

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

11 (26) 7

6 (14) 4

12 (?) 3

- [ ] A) 14
- [ ] B) 32
- [ ] C) 34
- [ ] D) 15
- [ ] E) 33

---

71 8 (6) 4

14 (?) 8

- [ ] A) 3
- [ ] B) 11
- [ ] C) 56
- [ ] D) 1.8
- [ ] E) 22

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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.

3 (16) 3

10 (28) 8

2 (?) 4

- [ ] A) 15
- [ ] B) 16
- [ ] C) 17
- [ ] D) 5
- [ ] E) 8

---

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

8 (12) 4

9 (14) 5

6 (?) 12

- [ ] A) 19
- [ ] B) 18
- [ ] C) 17
- [ ] D) 48
- [ ] E) 150

---

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

2 (32) 8

5 (40) 4

9 (?) 10

- [ ] A) 100
- [ ] B) 29
- [ ] C) 179
- [ ] D) 181
- [ ] E) 180

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Mark scheme · 3.18 Number Connections: Test Pack

Question 1

E) 15 - rule is addition: 5 + 7 = 12, so 9 + 6 = 15 **B1**

Answer: 15

Question 2

C) 20 - rule is (add the two numbers, then double): (3 + 5) x 2 = 16, so (6 + 4) x 2 = 20 **B1**

Answer: 20

Question 3

D) 25 - rule: add the two numbers then add 10; for 9 and 6 this gives 25 **B1**

Answer: D) 25

Question 4

D) 8 - rule: add the two outer numbers; for 4 and 4 this gives 8 **B1**

Answer: D) 8

Question 5

D) 20 - rule is (multiply, then halve): (4 x 6) / 2 = 12, so (5 x 8) / 2 = 20 **B1**

Answer: 20

Question 6

C) 21 - rule: multiply the first by 3 then subtract the second; for 8 and 3 this gives 21 **B1**

Answer: C) 21

Question 7

E) 40 - rule: add the two numbers then double; for 10 and 10 this gives 40 **B1**

Answer: E) 40

Question 8

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

Answer: A) 80

Question 9

E) 35 - rule: square the first number and add the second; for 5 and 10 this gives 35 **B1**

Answer: E) 35

Question 10

A) 15 - rule: double the first number and add the second; for 4 and 7 this gives 15 **B1**

Answer: A) 15

Question 11

A) 27 - rule: subtract the square of the second number from the square of the first; for 6 and 3 this gives 27 **B1**

Answer: A) 27

Question 12

C) 72 - rule: subtract then multiply by the first number; for 12 and 6 this gives 72 **B1**

Answer: C) 72

Question 13

E) 4 - rule: subtract the second outer number from the first; for 8 and 4 this gives 4 **B1**

Answer: E) 4

Question 14

D) 31 - rule: multiply then add 10; for 3 and 7 this gives 31 **B1**

Answer: D) 31

Question 15

B) 38 - rule: add the two numbers then double; for 10 and 9 this gives 38 **B1**

Answer: B) 38

Question 16

D) 29 - rule: multiply the first by 3 then add the second; for 6 and 11 this gives 29 **B1**

Answer: D) 29

Question 17

E) 28 - rule: add the two numbers then double; for 3 and 11 this gives 28 **B1**

Answer: E) 28

Question 18

A) 76 - rule: square the second number and add the first; for 12 and 8 this gives 76 **B1**

Answer: A) 76

Question 19

E) 35 - rule: subtract then multiply by the first number; for 7 and 2 this gives 35 **B1**

Answer: E) 35

Question 20

C) 15 - rule: square the first number and add the second; for 3 and 6 this gives 15 **B1**

Answer: C) 15

Question 21

E) 25 - rule: double the first number and add the second; for 9 and 7 this gives 25 **B1**

Answer: E) 25

Question 22

B) 18 - rule: add the two numbers then add 1; for 8 and 9 this gives 18 **B1**

Answer: B) 18

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Question 23

D) 6 - rule is (multiply, then divide by the difference): (8 x 4) / (8 - 4) = 8, so (6 x 3) / (6 - 3) = 6 **B1**

Answer: 6

Question 24

E) 1 - rule: subtract the second outer number from the first; for 10 and 9 this gives 1 **B1**

Answer: E) 1

Question 25

A) 44 - rule: subtract then multiply by the first number; for 11 and 7 this gives 44 **B1**

Answer: A) 44

Question 26

A) 11 - rule: add the two numbers then subtract 1; for 8 and 4 this gives 11 **B1**

Answer: A) 11

Question 27

B) 20 - rule: double the second number and add it to the first; for 12 and 4 this gives 20 **B1**

Answer: B) 20

Question 28

A) 18 - rule: multiply the first by 3 then subtract the second; for 7 and 3 this gives 18 **B1**

Answer: A) 18

Question 29

D) 35 - rule: square the first number and add the second; for 5 and 10 this gives 35 **B1**

Answer: D) 35

Question 30

E) 54 - rule: subtract then multiply by the first number; for 9 and 3 this gives 54 **B1**

Answer: E) 54

Question 31

B) 35 - rule: multiply the two outer numbers; for 7 and 5 this gives 35 **B1**

Answer: B) 35

Question 32

B) 17 - rule is (multiply, subtract twice the sum): (6 x 4) - (6 + 4) x 2 = 4, so (9 x 5) - (9 + 5) x 2 = 17 **B1**

Answer: 17

Question 33

E) 13 - rule: double the second number and add it to the first; for 9 and 2 this gives 13 **B1**

Answer: E) 13

Question 34

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

Answer: E) 9

Question 35

C) 15 - rule: add the two outer numbers; for 4 and 11 this gives 15 **B1**

Answer: C) 15

Question 36

B) 24 - rule: multiply the first by 3 then subtract the second; for 11 and 9 this gives 24 **B1**

Answer: B) 24

Question 37

A) 208 - rule: add the squares of the two numbers; for 12 and 8 this gives 208 **B1**

Answer: A) 208

Question 38

E) 21 - rule: square the first number and subtract the second; for 5 and 4 this gives 21 **B1**

Answer: E) 21

Question 39

E) 64 - rule: multiply then add 10; for 6 and 9 this gives 64 **B1**

Answer: E) 64

Question 40

E) 26 - rule: add the two numbers then double; for 11 and 2 this gives 26 **B1**

Answer: E) 26

Question 41

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

Answer: B) 22

Question 42

B) 18 - rule: add the two numbers then add 1; for 7 and 10 this gives 18 **B1**

Answer: B) 18

Question 43

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

Answer: E) 8

Question 44

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

Answer: C) 11

Question 45

E) 3 - rule: multiply the two numbers then subtract the first; for 3 and 2 this gives 3 **B1**

Answer: E) 3

Question 46

E) 79 - rule: multiply, then add both numbers; for 9 and 7 this gives 79 **B1**

Answer: E) 79

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Question 47

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

Answer: B) 30

Question 48

E) 55 - rule: multiply the two outer numbers; for 5 and 11 this gives 55 **B1**

Answer: E) 55

Question 49

C) 9 - rule: double the first number and subtract the second; for 7 and 5 this gives 9 **B1**

Answer: C) 9

Question 50

A) 13 - rule: add the two numbers then subtract 1; for 7 and 7 this gives 13 **B1**

Answer: A) 13

Question 51

C) 33 - rule: multiply the two numbers then add the first; for 11 and 2 this gives 33 **B1**

Answer: C) 33

Question 52

C) 28 - rule: multiply the two numbers then subtract the first; for 7 and 5 this gives 28 **B1**

Answer: C) 28

Question 53

C) 36 - rule: multiply the two numbers then add the first; for 4 and 8 this gives 36 **B1**

Answer: C) 36

Question 54

D) 151 - rule: square the second number and add the first; for 7 and 12 this gives 151 **B1**

Answer: D) 151

Question 55

C) 59 - rule: square the first number and subtract the second; for 8 and 5 this gives 59 **B1**

Answer: C) 59

Question 56

C) 25 - rule: double the second number and add it to the first; for 9 and 8 this gives 25 **B1**

Answer: C) 25

Question 57

C) 12 - rule: multiply the two outer numbers; for 6 and 2 this gives 12 **B1**

Answer: C) 12

Question 58

E) 13 - rule: multiply the sum by the difference; for 7 and 6 this gives 13 **B1**

Answer: E) 13

Question 59

B) 20 - rule: add the two outer numbers; for 10 and 10 this gives 20 **B1**

Answer: B) 20

Question 60

D) 12 - rule: subtract then multiply by the first number; for 12 and 11 this gives 12 **B1**

Answer: D) 12

Question 61

D) 7 - rule: subtract the second outer number from the first; for 9 and 2 this gives 7 **B1**

Answer: D) 7

Question 62

B) 34 - rule: multiply then add 10; for 4 and 6 this gives 34 **B1**

Answer: B) 34

Question 63

C) 5 - rule: subtract the second outer number from the first; for 9 and 4 this gives 5 **B1**

Answer: C) 5

Question 64

B) 24 - rule: add the two numbers then double; for 5 and 7 this gives 24 **B1**

Answer: B) 24

Question 65

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

Answer: B) 10

Question 66

C) 4 - rule: add the two numbers then subtract 1; for 3 and 2 this gives 4 **B1**

Answer: C) 4

Question 67

D) 27 - rule: multiply the two numbers then subtract the second; for 10 and 3 this gives 27 **B1**

Answer: D) 27

Question 68

B) 16 - rule: double the second number and add it to the first; for 12 and 2 this gives 16 **B1**

Answer: B) 16

Question 69

C) 9 - rule: multiply the sum by the difference; for 5 and 4 this gives 9 **B1**

Answer: C) 9

Question 70

E) 33 - rule: multiply the first by 3 then subtract the second; for 12 and 3 this gives 33 **B1**

Answer: E) 33

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Question 71

B) 11 - rule is the mean (add, then halve): (8 + 4) / 2 = 6, so (14 + 8) / 2 = 11 **B1**

Answer: 11

Question 72

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

Answer: B) 16

Question 73

B) 18 - rule: add the two outer numbers; for 6 and 12 this gives 18 **B1**

Answer: B) 18

Question 74

E) 180 - rule: multiply the two numbers then double; for 9 and 10 this gives 180 **B1**

Answer: E) 180

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