2.25 Number and Place Value Challenge: 1-hour Pack

Total Marks

GL ASSESSMENT EP.M25 · Calculators not allowed · about 60 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

Number and Place Value Challenge

Revision Library

A scholarship-level number skills paper for 11+ preparation. It covers place value into the millions and decimals, negative numbers, rounding and estimation, factors, multiples and primes, powers and roots, and the correct order of operations. Questions are ramped from warm-up recall items to demanding multi-step problems designed to stretch the strongest candidates.

1 Using each of the digit cards 7, 0, 2, 1 once, what is the difference between the largest and smallest 4-digit numbers that can be made?

- ☐ A) 8,237
- ☐ B) 6,183
- ☐ C) 7,210
- ☐ D) 6,182
- ☐ E) 7,083

---

2 Using each of the digit cards 7, 1, 2, 0 once, what is the difference between the largest and smallest 4-digit numbers that can be made?

- ☐ A) 6,184
- ☐ B) 6,174
- ☐ C) 8,237
- ☐ D) 6,183
- ☐ E) 7,083

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3 Using each of the digit cards 0, 1, 9, 4 once, what is the largest even 4-digit number that can be made?

- ☐ A) 9,140
- ☐ B) 9,411
- ☐ C) 1,049
- ☐ D) 9,409
- ☐ E) 9,410

---

4 Using each of the digit cards 2, 4, 6, 1 once, what is the difference between the largest and smallest 4-digit numbers that can be made?

- ☐ A) 5,166
- ☐ B) 5,175
- ☐ C) 6,421
- ☐ D) 5,174
- ☐ E) 7,667

---

5 Using each of the digit cards 0, 7, 9, 8 once, what is the largest even 4-digit number that can be made?

- ☐ A) 9,780
- ☐ B) 7,089
- ☐ C) 9,869
- ☐ D) 9,870
- ☐ E) 9,871

---

6 Using each of the digit cards 7, 1, 3, 0 once, what is the largest even 4-digit number that can be made?

- ☐ A) 7,310
- ☐ B) 7,311
- ☐ C) 1,037
- ☐ D) 7,309
- ☐ E) 7,130

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7 Using each of the digit cards 9, 2, 6, 4 once, what is the difference between the largest and smallest 4-digit numbers that can be made?

- ☐ A) 7,172
- ☐ B) 12,111
- ☐ C) 9,642
- ☐ D) 7,164
- ☐ E) 7,173

---

8 Using each of the digit cards 5, 6, 4, 8 once, what is the smallest odd 4-digit number that can be made?

- ☐ A) 4,568
- ☐ B) 4,685
- ☐ C) 4,865
- ☐ D) 8,654
- ☐ E) 4,686

---

9 Using each of the digit cards 5, 2, 0, 3 once, what is the difference between the largest and smallest 4-digit numbers that can be made?

- ☐ A) 5,085
- ☐ B) 3,276
- ☐ C) 3,284
- ☐ D) 3,285
- ☐ E) 7,355

---

10 Using each of the digit cards 9, 2, 5, 8 once, what is the difference between the largest and smallest 4-digit numbers that can be made?

- ☐ A) 7,264
- ☐ B) 12,441
- ☐ C) 7,263
- ☐ D) 7,254
- ☐ E) 7,262

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11 Using each of the digit cards 9, 4, 2, 7 once, what is the smallest odd 4-digit number that can be made?

- ☐ A) 2,479
- ☐ B) 9,742
- ☐ C) 2,480
- ☐ D) 2,478
- ☐ E) 2,497

---

12 Using each of the digit cards 4, 0, 3, 2 once, what is the largest even 4-digit number that can be made?

- ☐ A) 4,320
- ☐ B) 4,319
- ☐ C) 4,321
- ☐ D) 4,302
- ☐ E) 2,034

---

13 Using each of the digit cards 0, 1, 2, 7 once, what is the difference between the largest and smallest 4-digit numbers that can be made?

- ☐ A) 6,182
- ☐ B) 7,083
- ☐ C) 6,174
- ☐ D) 8,237
- ☐ E) 6,183

---

14 Using each of the digit cards 7, 0, 6, 2 once, what is the smallest odd 4-digit number that can be made?

- ☐ A) 267
- ☐ B) 7,620
- ☐ C) 2,607
- ☐ D) 2,067
- ☐ E) 2,068

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15 Using each of the digit cards 7, 2, 6, 9 once, what is the largest even 4-digit number that can be made?

- [ ] A) 9,763
- [ ] B) 9,762
- [ ] C) 9,761
- [ ] D) 9,726
- [ ] E) 2,679

---

16 In the number 84.036, what is the value of the digit 3?

- [ ] A) 3
- [ ] B) 0.3
- [ ] C) 0.03
- [ ] D) 0.003
- [ ] E) 30

---

17 Using each of the digit cards 3, 4, 5, 2 once, what is the difference between the largest and smallest 4-digit numbers that can be made?

- [ ] A) 3,087
- [ ] B) 3,078
- [ ] C) 7,777
- [ ] D) 3,088
- [ ] E) 3,086

---

18 Using each of the digit cards 0, 1, 8, 4 once, what is the smallest odd 4-digit number that can be made?

- [ ] A) 8,410
- [ ] B) 1,048
- [ ] C) 4,081
- [ ] D) 148
- [ ] E) 4,801

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19 Using each of the digit cards 9, 0, 7, 6 once, what is the difference between the largest and smallest 4-digit numbers that can be made?

- ☐ A) 15,839
- ☐ B) 9,081
- ☐ C) 3,682
- ☐ D) 3,672
- ☐ E) 3,681

---

20 Using each of the digit cards 4, 5, 0, 2 once, what is the smallest odd 4-digit number that can be made?

- ☐ A) 5,420
- ☐ B) 2,045
- ☐ C) 2,405
- ☐ D) 2,044
- ☐ E) 245

---

21 Using each of the digit cards 5, 6, 3, 2 once, what is the difference between the largest and smallest 4-digit numbers that can be made?

- ☐ A) 8,888
- ☐ B) 4,176
- ☐ C) 6,532
- ☐ D) 4,175
- ☐ E) 4,167

---

22 Using each of the digit cards 7, 5, 6, 9 once, what is the largest even 4-digit number that can be made?

- ☐ A) 9,757
- ☐ B) 5,679
- ☐ C) 9,765
- ☐ D) 9,576
- ☐ E) 9,756

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23 Using each of the digit cards 2, 8, 5, 0 once, what is the difference between the largest and smallest 4-digit numbers that can be made?

- ☐ A) 6,453
- ☐ B) 8,262
- ☐ C) 6,462
- ☐ D) 6,461
- ☐ E) 10,578

---

24 Using each of the digit cards 8, 5, 7, 9 once, what is the largest even 4-digit number that can be made?

- ☐ A) 9,758
- ☐ B) 9,757
- ☐ C) 9,759
- ☐ D) 5,789
- ☐ E) 9,875

---

25 Using each of the digit cards 6, 8, 5, 4 once, what is the largest even 4-digit number that can be made?

- ☐ A) 8,564
- ☐ B) 8,655
- ☐ C) 4,568
- ☐ D) 8,654
- ☐ E) 8,653

---

26 Using each of the digit cards 9, 1, 0, 5 once, what is the largest even 4-digit number that can be made?

- ☐ A) 9,150
- ☐ B) 9,511
- ☐ C) 9,510
- ☐ D) 1,059
- ☐ E) 9,509

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27 Using each of the digit cards 4, 8, 2, 3 once, what is the largest even 4-digit number that can be made?

- [ ] A) 8,432
- [ ] B) 8,433
- [ ] C) 2,348
- [ ] D) 8,431
- [ ] E) 8,342

---

28 Using each of the digit cards 3, 7, 9, 2 once, what is the difference between the largest and smallest 4-digit numbers that can be made?

- [ ] A) 9,732
- [ ] B) 7,353
- [ ] C) 7,352
- [ ] D) 7,344
- [ ] E) 12,111

---

29 Using each of the digit cards 1, 5, 4, 3 once, what is the smallest odd 4-digit number that can be made?

- [ ] A) 1,435
- [ ] B) 1,346
- [ ] C) 5,431
- [ ] D) 1,345
- [ ] E) 1,344

---

30 Using each of the digit cards 3, 2, 5, 0 once, what is the difference between the largest and smallest 4-digit numbers that can be made?

- [ ] A) 3,276
- [ ] B) 3,284
- [ ] C) 7,355
- [ ] D) 5,085
- [ ] E) 3,285

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31 Using each of the digit cards 6, 1, 5, 9 once, what is the smallest odd 4-digit number that can be made?

- [ ] A) 1,568
- [ ] B) 9,651
- [ ] C) 1,569
- [ ] D) 1,570
- [ ] E) 1,659

---

32 Using each of the digit cards 0, 1, 4, 8 once, what is the largest even 4-digit number that can be made?

- [ ] A) 1,048
- [ ] B) 8,140
- [ ] C) 8,409
- [ ] D) 8,411
- [ ] E) 8,410

---

33 Using each of the digit cards 4, 9, 2, 8 once, what is the smallest odd 4-digit number that can be made?

- [ ] A) 2,849
- [ ] B) 2,489
- [ ] C) 9,842
- [ ] D) 2,488
- [ ] E) 2,490

---

34 Using each of the digit cards 3, 5, 8, 7 once, what is the difference between the largest and smallest 4-digit numbers that can be made?

- [ ] A) 5,175
- [ ] B) 5,166
- [ ] C) 5,174
- [ ] D) 12,331
- [ ] E) 8,753

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35 Using each of the digit cards 7, 8, 1, 6 once, what is the difference between the largest and smallest 4-digit numbers that can be made?

- ☐ A) 10,439
- ☐ B) 8,761
- ☐ C) 7,084
- ☐ D) 7,083
- ☐ E) 7,074

---

36 Using each of the digit cards 8, 1, 5, 6 once, what is the largest even 4-digit number that can be made?

- ☐ A) 8,515
- ☐ B) 1,568
- ☐ C) 8,516
- ☐ D) 8,517
- ☐ E) 8,651

---

37 Using each of the digit cards 6, 8, 7, 4 once, what is the largest even 4-digit number that can be made?

- ☐ A) 8,764
- ☐ B) 4,678
- ☐ C) 8,746
- ☐ D) 8,765
- ☐ E) 8,763

---

38 Using each of the digit cards 6, 7, 0, 1 once, what is the smallest odd 4-digit number that can be made?

- ☐ A) 1,066
- ☐ B) 1,067
- ☐ C) 167
- ☐ D) 7,610
- ☐ E) 1,607

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39 Which of the following is NOT a multiple of 6?

- ☐ A) 42
- ☐ B) 54
- ☐ C) 68
- ☐ D) 72
- ☐ E) 96

---

40 What is the difference between the values of the two 7s in the number 7,070,000?

(2)

---

41 Which of these numbers is divisible by 9?

- ☐ A) 4,752
- ☐ B) 5,163
- ☐ C) 2,945
- ☐ D) 3,619
- ☐ E) 3,198

---

42 Using each of the digit cards 7, 1, 4, 9 once, what is the smallest odd 4-digit number that can be made?

- ☐ A) 1,497
- ☐ B) 1,479
- ☐ C) 1,478
- ☐ D) 9,741
- ☐ E) 1,480

---

43 Using each of the digit cards 8, 3, 2, 7 once, what is the largest even 4-digit number that can be made?

- ☐ A) 2,378
- ☐ B) 8,733
- ☐ C) 8,731
- ☐ D) 8,372
- ☐ E) 8,732

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44 Using each of the digit cards 0, 2, 9, 6, 5 once, what is the smallest odd 5-digit number that can be made?

- [ ] A) 20,659
- [ ] B) 96,520
- [ ] C) 20,568
- [ ] D) 20,569
- [ ] E) 20,570

---

45 Using each of the digit cards 8, 5, 6, 9 once, what is the largest even 4-digit number that can be made?

- [ ] A) 9,856
- [ ] B) 9,857
- [ ] C) 9,865
- [ ] D) 9,658
- [ ] E) 5,689

---

46 Using each of the digit cards 1, 4, 6, 9 once, what is the difference between the largest and smallest 4-digit numbers that can be made?

- [ ] A) 8,171
- [ ] B) 11,110
- [ ] C) 8,172
- [ ] D) 8,163
- [ ] E) 8,173

---

47 Using each of the digit cards 2, 7, 3, 6 once, what is the smallest odd 4-digit number that can be made?

- [ ] A) 2,637
- [ ] B) 2,366
- [ ] C) 7,632
- [ ] D) 2,367
- [ ] E) 2,368

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48 Using each of the digit cards 8, 7, 1, 9, 0 once, what is the difference between the largest and smallest 5-digit numbers that can be made?

- ☐ A) 98,710
- ☐ B) 96,921
- ☐ C) 87,912
- ☐ D) 109,499
- ☐ E) 87,921

---

49 Using each of the digit cards 8, 1, 9, 3 once, what is the difference between the largest and smallest 4-digit numbers that can be made?

- ☐ A) 8,433
- ☐ B) 8,442
- ☐ C) 11,220
- ☐ D) 8,441
- ☐ E) 8,443

---

50 Using each of the digit cards 4, 6, 2, 3 once, what is the largest even 4-digit number that can be made?

- ☐ A) 6,432
- ☐ B) 6,431
- ☐ C) 6,433
- ☐ D) 2,346
- ☐ E) 6,342

---

51 Using each of the digit cards 7, 0, 9, 1, 5 once, what is the difference between the largest and smallest 5-digit numbers that can be made?

- ☐ A) 86,931
- ☐ B) 86,932
- ☐ C) 95,931
- ☐ D) 108,089
- ☐ E) 86,922

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52 Using each of the digit cards 8, 1, 9, 5 once, what is the difference between the largest and smallest 4-digit numbers that can be made?

- [ ] A) 11,440
- [ ] B) 8,253
- [ ] C) 8,263
- [ ] D) 8,262
- [ ] E) 9,851

---

53 Using each of the digit cards 0, 1, 5, 9 once, what is the smallest odd 4-digit number that can be made?

- [ ] A) 1,058
- [ ] B) 1,059
- [ ] C) 9,510
- [ ] D) 1,060
- [ ] E) 1,095

---

54 Using each of the digit cards 1, 3, 9, 5 once, what is the difference between the largest and smallest 4-digit numbers that can be made?

- [ ] A) 8,173
- [ ] B) 8,163
- [ ] C) 8,171
- [ ] D) 10,890
- [ ] E) 8,172

---

55 Using each of the digit cards 9, 1, 6, 3, 4 once, what is the largest even 5-digit number that can be made?

- [ ] A) 13,469
- [ ] B) 96,431
- [ ] C) 96,314
- [ ] D) 96,313
- [ ] E) 96,134

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56 Using each of the digit cards 2, 6, 0, 8 once, what is the largest even 4-digit number that can be made?

- [ ] A) 8,619
- [ ] B) 2,068
- [ ] C) 8,602
- [ ] D) 8,621
- [ ] E) 8,620

---

57 Using each of the digit cards 6, 0, 9, 8 once, what is the difference between the largest and smallest 4-digit numbers that can be made?

- [ ] A) 9,171
- [ ] B) 3,770
- [ ] C) 3,772
- [ ] D) 3,771
- [ ] E) 15,949

---

58 Using each of the digit cards 4, 5, 7, 6, 8 once, what is the smallest odd 5-digit number that can be made?

- [ ] A) 87,654
- [ ] B) 45,686
- [ ] C) 45,687
- [ ] D) 45,678
- [ ] E) 45,867

---

59 Using each of the digit cards 7, 6, 5, 1 once, what is the largest even 4-digit number that can be made?

- [ ] A) 7,517
- [ ] B) 7,516
- [ ] C) 7,651
- [ ] D) 7,515
- [ ] E) 1,567

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60 Three bells ring at intervals of 12 minutes, 15 minutes and 20 minutes. All three ring together at 09:00. At what time will all three next ring together?

(3)

---

61 Which of these numbers is the largest?

- ☐ A) 4,090,000
- ☐ B) 4,009,000
- ☐ C) 490,000
- ☐ D) 4,099,000
- ☐ E) 4,900,000

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Mark scheme · 2.25 Number and Place Value Challenge: 1-hour Pack

Question 1

correct option B (6,183) cao **B1**

Answer: B) 6,183

Question 2

correct option D (6,183) cao **B1**

Answer: D) 6,183

Question 3

correct option E (9,410) cao **B1**

Answer: E) 9,410

Question 4

correct option B (5,175) cao **B1**

Answer: B) 5,175

Question 5

correct option D (9,870) cao **B1**

Answer: D) 9,870

Question 6

correct option A (7,310) cao **B1**

Answer: A) 7,310

Question 7

correct option E (7,173) cao **B1**

Answer: E) 7,173

Question 8

correct option B (4,685) cao **B1**

Answer: B) 4,685

Question 9

correct option D (3,285) cao **B1**

Answer: D) 3,285

Question 10

correct option C (7,263) cao **B1**

Answer: C) 7,263

Question 11

correct option A (2,479) cao **B1**

Answer: A) 2,479

Question 12

correct option A (4,320) cao **B1**

Answer: A) 4,320

Question 13

correct option E (6,183) cao **B1**

Answer: E) 6,183

Question 14

correct option D (2,067) cao **B1**

Answer: D) 2,067

Question 15

correct option B (9,762) cao **B1**

Answer: B) 9,762

Question 16

C (0.03) cao **B1**

Answer: C) 0.03

Question 17

correct option A (3,087) cao **B1**

Answer: A) 3,087

Question 18

correct option C (4,081) cao **B1**

Answer: C) 4,081

Question 19

correct option E (3,681) cao **B1**

Answer: E) 3,681

Question 20

correct option B (2,045) cao **B1**

Answer: B) 2,045

Question 21

correct option B (4,176) cao **B1**

Answer: B) 4,176

Question 22

correct option E (9,756) cao **B1**

Answer: E) 9,756

Question 23

correct option C (6,462) cao **B1**

Answer: C) 6,462

Question 24

correct option A (9,758) cao **B1**

Answer: A) 9,758

Question 25

correct option D (8,654) cao **B1**

Answer: D) 8,654

Question 26

correct option C (9,510) cao **B1**

Answer: C) 9,510

Question 27

correct option A (8,432) cao **B1**

Answer: A) 8,432

Question 28

correct option B (7,353) cao **B1**

Answer: B) 7,353

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Question 29

correct option D (1,345) cao **B1**

Answer: D) 1,345

Question 30

correct option E (3,285) cao **B1**

Answer: E) 3,285

Question 31

correct option C (1,569) cao **B1**

Answer: C) 1,569

Question 32

correct option E (8,410) cao **B1**

Answer: E) 8,410

Question 33

correct option B (2,489) cao **B1**

Answer: B) 2,489

Question 34

correct option A (5,175) cao **B1**

Answer: A) 5,175

Question 35

correct option D (7,083) cao **B1**

Answer: D) 7,083

Question 36

correct option C (8,516) cao **B1**

Answer: C) 8,516

Question 37

correct option A (8,764) cao **B1**

Answer: A) 8,764

Question 38

correct option B (1,067) cao **B1**

Answer: B) 1,067

Question 39

C (68) cao **B1**

Answer: C) 68

Question 40

identifies both values, 7,000,000 and 70,000, oe **M1**

6,930,000 cao **A1**

Answer: 6,930,000

Question 41

correct option A (4,752) cao **B1**

Answer: A) 4,752

Question 42

correct option B (1,479) cao **B1**

Answer: B) 1,479

Question 43

correct option E (8,732) cao **B1**

Answer: E) 8,732

Question 44

correct option D (20,569) cao **B1**

Answer: D) 20,569

Question 45

correct option A (9,856) cao **B1**

Answer: A) 9,856

Question 46

correct option C (8,172) cao **B1**

Answer: C) 8,172

Question 47

correct option D (2,367) cao **B1**

Answer: D) 2,367

Question 48

correct option E (87,921) cao **B1**

Answer: E) 87,921

Question 49

correct option B (8,442) cao **B1**

Answer: B) 8,442

Question 50

correct option A (6,432) cao **B1**

Answer: A) 6,432

Question 51

correct option A (86,931) cao **B1**

Answer: A) 86,931

Question 52

correct option D (8,262) cao **B1**

Answer: D) 8,262

Question 53

correct option B (1,059) cao **B1**

Answer: B) 1,059

Question 54

correct option E (8,172) cao **B1**

Answer: E) 8,172

Question 55

correct option C (96,314) cao **B1**

Answer: C) 96,314

Question 56

correct option E (8,620) cao **B1**

Answer: E) 8,620

Question 57

correct option D (3,771) cao **B1**

Answer: D) 3,771

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Question 58

correct option C (45,687) cao **B1**

Answer: C) 45,687

Question 59

correct option B (7,516) cao **B1**

Answer: B) 7,516

Question 60

writes 12, 15 and 20 as products of prime factors ($12 = 2^2$ x 3, 15 = 3 x 5, 20 = 2^2 x 5) oe **M1**

dependent on the previous mark: combines the highest power of each prime to find LCM = 2^2 x 3 x 5 = 60 **dM1**

10:00 cao (accept '60 minutes later' or '1 hour later') **A1**

Answer: 10:00

Question 61

correct option E (4,900,000) cao **B1**

Answer: E) 4,900,000

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