2.87 Divisibility Rules and Number Property Puzzles: 1-hour Pack

Total Marks

GL ASSESSMENT GL-11PLUS-MATHS · Calculators not allowed · about 60 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 The number 327* is divisible by 9, where * stands for one digit. What is the digit?

- ☐ A) 8
- ☐ B) 6
- ☐ C) 1
- ☐ D) 0
- ☐ E) 3

---

2 Which of these numbers is divisible by 15?

- ☐ A) 480
- ☐ B) 905
- ☐ C) 351
- ☐ D) 455
- ☐ E) 789

---

3 The number 1641* is divisible by 11, where * stands for one digit. What is the digit?

- ☐ A) 0
- ☐ B) 1
- ☐ C) 4
- ☐ D) 2
- ☐ E) 9

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4 Which of these numbers is divisible by 6?

- [ ] A) 478
- [ ] B) 216
- [ ] C) 279
- [ ] D) 207
- [ ] E) 776

---

5 The number 9616* is divisible by 9, where * stands for one digit. What is the digit?

- [ ] A) 9
- [ ] B) 3
- [ ] C) 6
- [ ] D) 2
- [ ] E) 5

---

6 Which of these numbers is divisible by both 2 and 3?

- [ ] A) 143
- [ ] B) 154
- [ ] C) 156
- [ ] D) 158
- [ ] E) 160

---

7 The number 243*4 is divisible by 9, where * stands for one digit. What is the digit?

- [ ] A) 5
- [ ] B) 1
- [ ] C) 4
- [ ] D) 6
- [ ] E) 9

---

8 Which of these numbers is divisible by 20?

- [ ] A) 896
- [ ] B) 645
- [ ] C) 528
- [ ] D) 360
- [ ] E) 610

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9 The number 6*19 is divisible by 11, where * stands for one digit. What is the digit?

- [ ] A) 1
- [ ] B) 9
- [ ] C) 2
- [ ] D) 4
- [ ] E) 7

---

10 Which of these numbers is divisible by 20?

- [ ] A) 680
- [ ] B) 165
- [ ] C) 635
- [ ] D) 916
- [ ] E) 632

---

11 The number 2*36 is divisible by 9, where * stands for one digit. What is the digit?

- [ ] A) 8
- [ ] B) 6
- [ ] C) 7
- [ ] D) 4
- [ ] E) 1

---

12 Which of these numbers is divisible by 36?

- [ ] A) 776
- [ ] B) 243
- [ ] C) 423
- [ ] D) 96
- [ ] E) 2124

---

13 The number 8*32 is divisible by 9, where * stands for one digit. What is the digit?

- [ ] A) 5
- [ ] B) 6
- [ ] C) 8
- [ ] D) 1
- [ ] E) 4

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14 The number 82*5 is divisible by 9, where * stands for one digit. What is the digit?

- [ ] A) 2
- [ ] B) 6
- [ ] C) 5
- [ ] D) 3
- [ ] E) 0

---

15 Which of these numbers is divisible by 36?

- [ ] A) 876
- [ ] B) 512
- [ ] C) 1404
- [ ] D) 675
- [ ] E) 945

---

16 The number 6*2 is divisible by 9, where * stands for one digit. What is the digit?

- [ ] A) 7
- [ ] B) 1
- [ ] C) 4
- [ ] D) 5
- [ ] E) 9

---

17 The number 8*3 is divisible by 11, where * stands for one digit. What is the digit?

- [ ] A) 1
- [ ] B) 4
- [ ] C) 6
- [ ] D) 0
- [ ] E) 3

---

18 Which of these numbers is divisible by 36?

- [ ] A) 783
- [ ] B) 760
- [ ] C) 1440
- [ ] D) 81
- [ ] E) 356

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19 The number 343*9 is divisible by 11, where * stands for one digit. What is the digit?

- [ ] A) 4
- [ ] B) 0
- [ ] C) 8
- [ ] D) 5
- [ ] E) 3

---

20 The number 533* is divisible by 11, where * stands for one digit. What is the digit?

- [ ] A) 1
- [ ] B) 9
- [ ] C) 7
- [ ] D) 5
- [ ] E) 8

---

21 Which of these numbers is divisible by 18?

- [ ] A) 604
- [ ] B) 198
- [ ] C) 638
- [ ] D) 423
- [ ] E) 387

---

22 The number 67*72 is divisible by 11, where * stands for one digit. What is the digit?

- [ ] A) 7
- [ ] B) 0
- [ ] C) 2
- [ ] D) 9
- [ ] E) 6

---

23 Which of these four-digit numbers is divisible by 11?

- [ ] A) 3080
- [ ] B) 2745
- [ ] C) 4516
- [ ] D) 3928
- [ ] E) 6601

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24 Which of these numbers is divisible by 24?

- [ ] A) 880
- [ ] B) 315
- [ ] C) 1248
- [ ] D) 297
- [ ] E) 616

---

25 The number 64*2 is divisible by 11, where * stands for one digit. What is the digit?

- [ ] A) 0
- [ ] B) 2
- [ ] C) 1
- [ ] D) 6
- [ ] E) 9

---

26 Which of these numbers is divisible by 24?

- [ ] A) 784
- [ ] B) 279
- [ ] C) 568
- [ ] D) 258
- [ ] E) 960

---

27 Which of these numbers is divisible by 20?

- [ ] A) 580
- [ ] B) 612
- [ ] C) 755
- [ ] D) 396
- [ ] E) 185

---

28 The number 1*852 is divisible by 9, where * stands for one digit. What is the digit?

- [ ] A) 7
- [ ] B) 3
- [ ] C) 5
- [ ] D) 2
- [ ] E) 6

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29 Which of these numbers is divisible by 6?

- [ ] A) 548
- [ ] B) 297
- [ ] C) 216
- [ ] D) 934
- [ ] E) 165

---

30 Which of these numbers is divisible by 20?

- [ ] A) 1160
- [ ] B) 896
- [ ] C) 695
- [ ] D) 848
- [ ] E) 515

---

31 The number 299* is divisible by 11, where * stands for one digit. What is the digit?

- [ ] A) 3
- [ ] B) 6
- [ ] C) 2
- [ ] D) 4
- [ ] E) 0

---

32 The number 84*9 is divisible by 9, where * stands for one digit. What is the digit?

- [ ] A) 5
- [ ] B) 9
- [ ] C) 3
- [ ] D) 4
- [ ] E) 6

---

33 Which of these numbers is divisible by 24?

- [ ] A) 688
- [ ] B) 972
- [ ] C) 207
- [ ] D) 360
- [ ] E) 400

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34 The number 61*3 is divisible by 9, where * stands for one digit. What is the digit?

- [ ] A) 0
- [ ] B) 7
- [ ] C) 8
- [ ] D) 5
- [ ] E) 4

---

35 Which of these numbers is divisible by 36?

- [ ] A) 356
- [ ] B) 729
- [ ] C) 594
- [ ] D) 948
- [ ] E) 1908

---

36 The number 1*932 is divisible by 9, where * stands for one digit. What is the digit?

- [ ] A) 3
- [ ] B) 6
- [ ] C) 1
- [ ] D) 4
- [ ] E) 0

---

37 Which of these numbers is divisible by 30?

- [ ] A) 680
- [ ] B) 1380
- [ ] C) 405
- [ ] D) 816
- [ ] E) 162

---

38 The number 6*469 is divisible by 9, where * stands for one digit. What is the digit?

- [ ] A) 3
- [ ] B) 5
- [ ] C) 0
- [ ] D) 9
- [ ] E) 2

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39 The number 48* is divisible by 11, where * stands for one digit. What is the digit?

- ☐ A) 4
- ☐ B) 0
- ☐ C) 6
- ☐ D) 3
- ☐ E) 5

---

40 What is the smallest three-digit number that is divisible by 2, 3, 5 and 7?

(1)

---

41 Which of these numbers is divisible by 12?

- ☐ A) 519
- ☐ B) 336
- ☐ C) 570
- ☐ D) 484
- ☐ E) 860

---

42 Which of these numbers is divisible by 6?

- ☐ A) 806
- ☐ B) 360
- ☐ C) 788
- ☐ D) 663
- ☐ E) 93

---

43 Which of these numbers is divisible by 20?

- ☐ A) 844
- ☐ B) 470
- ☐ C) 460
- ☐ D) 250
- ☐ E) 576

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44 Which of these numbers is divisible by 20?

- [ ] A) 292
- [ ] B) 328
- [ ] C) 665
- [ ] D) 705
- [ ] E) 920

---

45 Which of these numbers is divisible by 20?

- [ ] A) 285
- [ ] B) 944
- [ ] C) 284
- [ ] D) 880
- [ ] E) 730

---

46 Which of these numbers is divisible by 24?

- [ ] A) 591
- [ ] B) 464
- [ ] C) 369
- [ ] D) 264
- [ ] E) 824

---

47 Which of these numbers is divisible by 15?

- [ ] A) 588
- [ ] B) 645
- [ ] C) 550
- [ ] D) 985
- [ ] E) 762

---

48 Which of these numbers is divisible by 6?

- [ ] A) 210
- [ ] B) 854
- [ ] C) 999
- [ ] D) 406
- [ ] E) 321

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49 Which of these numbers is divisible by 4?

- [ ] A) 123
- [ ] B) 124
- [ ] C) 125
- [ ] D) 126
- [ ] E) 127

---

50 Which of these numbers is divisible by 36?

- [ ] A) 848
- [ ] B) 315
- [ ] C) 792
- [ ] D) 207
- [ ] E) 984

---

51 Which of these numbers is divisible by 15?

- [ ] A) 336
- [ ] B) 485
- [ ] C) 813
- [ ] D) 715
- [ ] E) 870

---

52 Which of these numbers is divisible by 24?

- [ ] A) 549
- [ ] B) 440
- [ ] C) 945
- [ ] D) 672
- [ ] E) 136

---

53 Which of these numbers is divisible by 6?

- [ ] A) 146
- [ ] B) 741
- [ ] C) 837
- [ ] D) 452
- [ ] E) 36

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54 Which of these numbers is divisible by 15?

- [ ] A) 475
- [ ] B) 156
- [ ] C) 345
- [ ] D) 639
- [ ] E) 310

---

55 Which of these numbers is divisible by 36?

- [ ] A) 819
- [ ] B) 1872
- [ ] C) 126
- [ ] D) 52
- [ ] E) 200

---

56 Which of these numbers is divisible by 15?

- [ ] A) 110
- [ ] B) 180
- [ ] C) 177
- [ ] D) 918
- [ ] E) 755

---

57 Which of these numbers is divisible by 20?

- [ ] A) 940
- [ ] B) 216
- [ ] C) 255
- [ ] D) 415
- [ ] E) 224

---

58 Which of these numbers is divisible by 20?

- [ ] A) 568
- [ ] B) 195
- [ ] C) 616
- [ ] D) 110
- [ ] E) 900

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59 Which of these numbers is divisible by 36?

- ☐ A) 918
- ☐ B) 236
- ☐ C) 1548
- ☐ D) 156
- ☐ E) 387

---

60 Which of these numbers is divisible by 12?

- ☐ A) 980
- ☐ B) 232
- ☐ C) 129
- ☐ D) 84
- ☐ E) 378

---

61 Which of these numbers is divisible by 20?

- ☐ A) 720
- ☐ B) 750
- ☐ C) 235
- ☐ D) 392
- ☐ E) 336

---

62 Which of these numbers is divisible by 6?

- ☐ A) 40
- ☐ B) 144
- ☐ C) 760
- ☐ D) 441
- ☐ E) 93

---

63 What is the smallest three-digit number that is divisible by 6, by 8 and by 9?

(2)

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Mark scheme · 2.87 Divisibility Rules and Number Property Puzzles: 1-hour Pack

Question 1

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

Answer: B) 6

Question 2

correct option A (480) cao **B1**

Answer: A) 480

Question 3

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

Answer: D) 2

Question 4

correct option B (216) cao **B1**

Answer: B) 216

Question 5

correct option E (5) cao **B1**

Answer: E) 5

Question 6

correct option C (156) cao **B1**

Answer: C) 156 (156 is even and 1 + 5 + 6 = 12, divisible by 3, so divisible by 6).

Question 7

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

Answer: A) 5

Question 8

correct option D (360) cao **B1**

Answer: D) 360

Question 9

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

Answer: B) 9

Question 10

correct option A (680) cao **B1**

Answer: A) 680

Question 11

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

Answer: C) 7

Question 12

correct option E (2124) cao **B1**

Answer: E) 2124

Question 13

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

Answer: A) 5

Question 14

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

Answer: D) 3

Question 15

correct option C (1404) cao **B1**

Answer: C) 1404

Question 16

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

Answer: B) 1

Question 17

correct option D (0) cao **B1**

Answer: D) 0

Question 18

correct option C (1440) cao **B1**

Answer: C) 1440

Question 19

correct option B (0) cao **B1**

Answer: B) 0

Question 20

correct option D (5) cao **B1**

Answer: D) 5

Question 21

correct option B (198) cao **B1**

Answer: B) 198

Question 22

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

Answer: E) 6

Question 23

correct option A (3080) cao **B1**

Answer: A) 3080 (3 - 0 + 8 - 0 = 11, divisible by 11).

Question 24

correct option C (1248) cao **B1**

Answer: C) 1248

Question 25

correct option A (0) cao **B1**

Answer: A) 0

Question 26

correct option E (960) cao **B1**

Answer: E) 960

Question 27

correct option A (580) cao **B1**

Answer: A) 580

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Question 28

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

Answer: D) 2

Question 29

correct option C (216) cao **B1**

Answer: C) 216

Question 30

correct option A (1160) cao **B1**

Answer: A) 1160

Question 31

correct option C (2) cao **B1**

Answer: C) 2

Question 32

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

Answer: E) 6

Question 33

correct option D (360) cao **B1**

Answer: D) 360

Question 34

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

Answer: C) 8

Question 35

correct option E (1908) cao **B1**

Answer: E) 1908

Question 36

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

Answer: A) 3

Question 37

correct option B (1380) cao **B1**

Answer: B) 1380

Question 38

correct option E (2) cao **B1**

Answer: E) 2

Question 39

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

Answer: A) 4

Question 40

210 cao **B1**

Answer: 210

Question 41

correct option B (336) cao **B1**

Answer: B) 336

Question 42

correct option B (360) cao **B1**

Answer: B) 360

Question 43

correct option C (460) cao **B1**

Answer: C) 460

Question 44

correct option E (920) cao **B1**

Answer: E) 920

Question 45

correct option D (880) cao **B1**

Answer: D) 880

Question 46

correct option D (264) cao **B1**

Answer: D) 264

Question 47

correct option B (645) cao **B1**

Answer: B) 645

Question 48

correct option A (210) cao **B1**

Answer: A) 210

Question 49

correct option B (124) cao **B1**

Answer: B) 124 (last two digits 24, and 24 is divisible by 4).

Question 50

correct option C (792) cao **B1**

Answer: C) 792

Question 51

correct option E (870) cao **B1**

Answer: E) 870

Question 52

correct option D (672) cao **B1**

Answer: D) 672

Question 53

correct option E (36) cao **B1**

Answer: E) 36

Question 54

correct option C (345) cao **B1**

Answer: C) 345

Question 55

correct option B (1872) cao **B1**

Answer: B) 1872

Question 56

correct option B (180) cao **B1**

Answer: B) 180

Question 57

correct option A (940) cao **B1**

Answer: A) 940

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Question 58

correct option E (900) cao **B1**

Answer: E) 900

Question 59

correct option C (1548) cao **B1**

Answer: C) 1548

Question 60

correct option D (84) cao **B1**

Answer: D) 84

Question 61

correct option A (720) cao **B1**

Answer: A) 720

Question 62

correct option B (144) cao **B1**

Answer: B) 144

Question 63

LCM of 6, 8 and 9 found or implied (LCM = 72) oe **M1**

144 cao **A1**

Answer: 144

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