Math Mammoth Grade 3 End of the Year Test Answer Key

Grade 3, End of the Year Test

1.

×	0	1	2	3	4	5	6	7	8	9	10	11	12
0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6	7	8	9	10	11	12
2	0	2	4	6	8	10	12	14	16	18	20	22	24
3	0	3	6	9	12	15	18	21	24	27	30	33	36
4	0	4	8	12	16	20	24	28	32	36	40	44	48
5	0	5	10	15	20	25	30	35	40	45	50	55	60
6	0	6	12	18	24	30	36	42	48	54	60	66	72
7	0	7	14	21	28	35	42	49	56	63	70	77	84
8	0	8	16	24	32	40	48	56	64	72	80	88	96
9	0	9	18	27	36	45	54	63	72	81	90	99	108
10	0	10	20	30	40	50	60	70	80	90	100	110	120
11	0	11	22	33	44	55	66	77	88	99	110	121	132
12	0	12	24	36	48	60	72	84	96	108	120	132	144

2. a. 14, 24, 25, 36 b. 28, 40, 27, 35 c. 9, 16, 49, 32 d. 56, 30, 48, 54

3. a. 7, 5, 8, 7 b. 8, 5, 11, 7 c. 9, 7, 4, 9 d. 10, 8, 3, 3

4. a. 310, 149 b. 620, 3444 c. 148, 80

5. a. 33, 5 b. 643, 45 c. 15, 378

6. a. 579. To check, add 579 + 383 = 962 using the grid. b. 2,476. To check, add 2,476 + 4,526 = 7,002 using the grid.

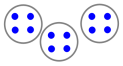
7. a. 7,153 b. 792. Note the order of operations; the subtraction is done first.

8. a. is 294. Solve by subtracting 708 − 414. b. is 824. Solve by adding 485 + 339.

9. $83

10. 160 miles. Note that the half-way point is at 150 miles. They stopped at 140 miles (10 miles before 150 miles).

11. a. 800 light bulbs b. 736 are left. Solve by subtracting 800 − 64.

12. 

13. 5 × 25 = 125. You can solve it by adding repeatedly: 25 + 25 + 25 + 25 + 25 = 125

14. a. 48 b. 20 c. 41

15. a. 7 × 4 = 28 legs b. 5 × 2 = 10 legs c. 8 × 4 + 6 × 2 = 44 legs

16. 8 tables, because 8 × 4 = 32, which is more than 31. Seven tables is not enough.

17. 3 × $8 + 3 × $6 = $42

18. She needs 7 bags. (Because 7 × 4 = 28.)

19.

	a. 10:51	b. 2:34	c. 3:57	d. 5:38
10 min. later	11:01	2:44	4:07	5:48

20. a. 45 minutes b. 3:50 PM c. May 28

21. a. 28 hours b. 12 hours c. 9 hours more d. 48 hours

22. a. $25.54 b. $9.10 c. $12.70

23. a. $2.90 b. $0.55

24. $0.60. (You can add $2.35 + $2.35 + $2.35 + $2.35 = $9.40 to find the total cost.)

25. a. 700 b. 2,000

26. a. > b. < c. < d. > e. >

27. a. 5,700; 8,600 b. 1,200; 7,800

28. a. 740 b. 990 c. 250 d. 670

29.

a. Round the numbers, then add: 3,782 + 2,255 ↓ ↓ 3,800 + 2,300 = 6,100	Calculate exactly: 3782 + 2255 6037
b. Round the numbers, then subtract: 8,149 – 888 ↓ ↓ 8,100 – 900 = 7,200	Calculate exactly: 8149 – 888 7261

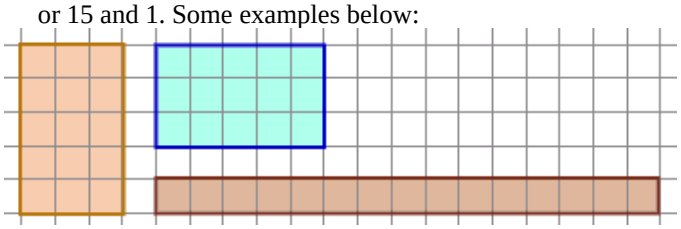
30. A - rectangle B - square C - rhombus D - rhombus G - rhombus
Also, F is a parallelogram; however that is not studied in third grade.

31. Perimeter 22 units Area 24 square units or squares
Note that the student should also give the "units" and "square units" or "squares", not just a plain number.

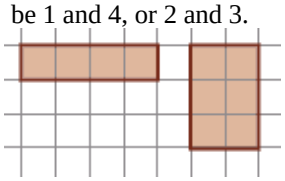
32. a. Part 1: 108 m^2 Part 2: 270 m^2 b. 96 m
Note that the student should also give the units "m^2" and "m" in his/her answer, not just plain numbers.

33. 9 inches.

34. a. The sides of the rectangle could be 5 and 3, or 15 and 1. Some examples below:



b. The sides of the rectangle could be 1 and 4, or 2 and 3.



35. $4 \times (2 + 5) = 4 \times 2 + 4 \times 5 = 28$ squares

36. Check students' answers.

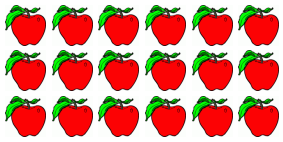
a.

b.

37. mm cm m km

38. ounces (oz) and milliliters (ml)

39. a. feet or ft b. cm c. kg/lb d. C (cups) e. kg f. feet or ft

40. 

$3 \times 6 = 18 \quad 18 \div 3 = 6$

$6 \times 3 = 18 \quad 18 \div 6 = 3$

41. a. 17, not possible b. 1, not possible c. 1, 0

42. a. 8 R1 b. 4 R4 c. 6 R5

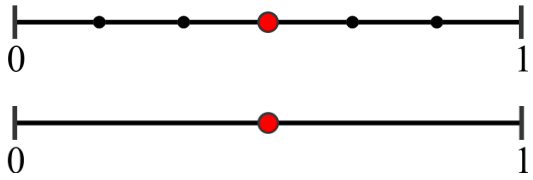
43. Can he divide the children equally into teams of 5? **No.**
Teams of 6? **Yes.** Teams of 7? **No.**

44. Each child paid $10.00.

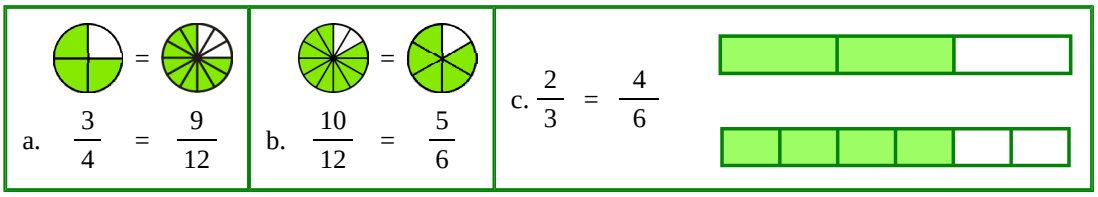
45. a. $\frac{3}{8}$ b. $\frac{7}{9}$ c. $\frac{2}{4}$ d. $2\frac{2}{5}$ e. $\frac{2}{3}$ f. $\frac{9}{10}$

46. 1 = 10/10 b. 2 = 10/5 c. 4 = 24/6

47.



48.



49. a. < b. < c. < d. >

50. We cannot tell who ate more pie, because the two pies are of different sizes and it is not totally clear from the pictures which is more pie. And, even though the fraction 7/12 is more than 1/2, this thinking cannot be used here when the wholes are of different sizes.