

Math Mammoth Grade 3 South African Version End of the Year Test Answer Key

Grade 3 South African Version, 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, 344 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.

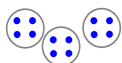
8. a.  is 294. Solve by subtracting $708 - 414$. b.  is 824. Solve by adding $485 + 339$.

9. R83,00

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

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

12.



13. $5 \times 25 = 125$. You can solve it by adding repeatedly: $25 + 25 + 25 + 25 + 25 = 125$

14. a. 48 b. 20 c. 41

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

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

17. $3 \times R8 + 3 \times R6 = R24 + R18 = R42$

18. She needs 7 bags. (Because $7 \times 4 = 28$.)

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. 28 May

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

22. a. R235,45 b. R21,10 c. R25,70

23. a. R2,90 b. R0,55

24. R0,60. (You can add R2,35 + R2,35 + R2,35 + R2,35 = R9,40 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.

<p>a. Round the numbers, then add:</p> $\begin{array}{r} 3782 \\ \downarrow \\ 3800 \end{array} + \begin{array}{r} 2255 \\ \downarrow \\ 2300 \end{array} = 6100$	<p>Calculate exactly:</p> $\begin{array}{r} 3782 \\ + 2255 \\ \hline 6037 \end{array}$
<p>b. Round the numbers, then subtract:</p> $\begin{array}{r} 8149 \\ \downarrow \\ 8100 \end{array} - \begin{array}{r} 888 \\ \downarrow \\ 900 \end{array} = 7200$	<p>Calculate exactly:</p> $\begin{array}{r} 8149 \\ - 888 \\ \hline 7261 \end{array}$

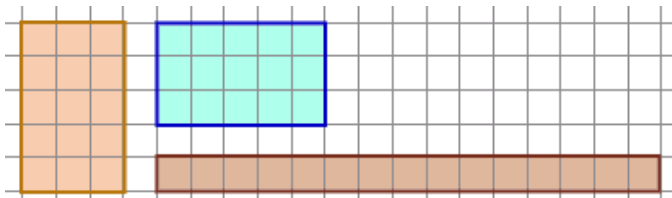
30. A - rectangle B - square C - rhombus D - rhombus G - rhombus
Also, F is a parallelogram; however that is not studied in third grade.

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.

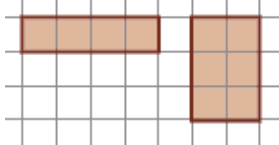
32. a. Part 1: 108 m² Part 2: 270 m² b. 96 m
Note that the student should also give the units “m²” and “m” in his/her answer, not just plain numbers.

33. It measures 23 centimetres.

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. millilitres (ml)

39. a. metres or m b. cm c. kg d. ml (millilitres) e. kg f. metres or m

40.  $3 \times 6 = 18$ $18 \div 3 = 6$
 $6 \times 3 = 18$ $18 \div 6 = 3$

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

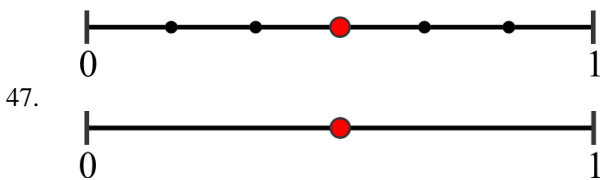
42. a. 8 R1 b. 4 R4 c. 6 R5

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





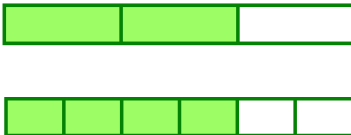
44. Each child paid R10,00.

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. $4 = 24/6$



48.

 =  a. $\frac{3}{4} = \frac{9}{12}$	 =  b. $\frac{10}{12} = \frac{5}{6}$	c. $\frac{2}{3} = \frac{4}{6}$	
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49. a. < b. < c. < d. >

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