

Math Mammoth Grade 4 South African Version

End-of-the-Year Test Answer Key

1. 1980. Add to check: $1\,980 + 543 + 2\,677$ equals $5\,200$.

2. a. $\approx R7 + R19 + R14 + R19 = R59$

b. The total cost is $R7,25 + R18,90 + R13,75 + R19,30 = R59,20$. Her change is $R60 - R59,20 = R0,80$.

3. Estimate: $5 \times R12 + 2 \times R21 = R60 + R42 = R102$

4. a. 30; 84 b. 11; 14 c. 140; 19

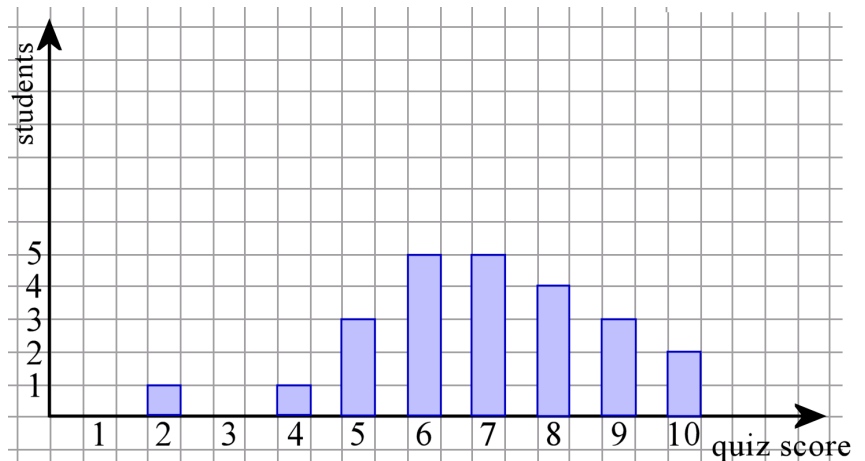
5. a. $R35 + x = R92$; $x = R57$ b. $x - 24 = 37$; $x = 61$

6. a. 2 000 1 750 1 500 1 250 1 000 750 500 250

b. 200, 500, 800, 1 100, 1 400, 1 700

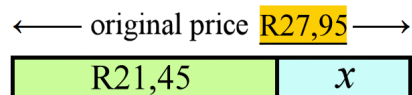
7. In the frequency table, we list how many students got that score.

Quiz score	Frequency
1	0
2	1
3	0
4	1
5	3
6	5
7	5
8	4
9	3
10	2



8.

A doll used to cost R27,95 but now the price is R21,45. How much is the discount?
 $R21,45 + x = R27,95$ OR $x = R27,95 - R21,45$
 $x = R6,50$



9. a. 1 999 b. 4 980 c. 5 700

10. a. 800 050 b. 25 407

11. a. 30 000 b. 9 000 c. 600

12. a. < b. > c. >

13. 27 200 217 200 227 200 227 712

14. a. 440 000 b. 90 000 c. 27 500

15. a. 430 000 b. 500 000 c. 10 000

16. a. 501 663 b. 323 688

17. a. 210 b. 4 800 c. 3 200 d. 120 e. 80 f. 70

18. a. R160 b. R800 c. Four days, since $4 \times R160 = R640$
19. a. Estimate $5 \times 200 = 1\,000$. Exact: 980
 b. Estimate $40 \times 40 = 1\,600$ or $30 \times 40 = 1\,200$. Exact: 1 330
 c. Estimate $7 \times 3\,000 = 21\,000$. Exact: 22 316
 d. Estimate $90 \times 20 = 1\,800$. Exact: 1 958

20.

$\begin{aligned} \text{Area} &= 8 \times 127 \\ &= 8 \times 100 + 8 \times 20 + 8 \times 7 \\ &= 800 + 160 + 56 = 1\,016 \end{aligned}$	
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21. a. Answers may vary.
 For example: $R400 - 26 \times R14 = R400 - R364 = R36$. Or, $26 \times R14 = R364$ and $R400 - R364 = R36$.
 b. 24×60 minutes = 1 440 minutes
 c. Answers may vary. For example: 4×375 cm = 1 500 cm. Or, 375 cm + 375 cm + 375 cm + 375 cm = 1 500 cm
 d. Answers may vary. For example: $(R277 - R58) \times 8 = R1\,752$. Or, $R277 - R58 = R219$ and $8 \times R219 = R1\,752$.
22. Answers may vary if the test is printed with “shrink to fit” or “fit to printable area”, or because of slight variation in rulers, or because of measuring inaccurately. Please check the student's answers.
 a. 13 cm 3 mm. 13 cm 4 mm is also acceptable. b. 9 cm 8 mm. 9 cm 9 mm is also acceptable.
23. 6 hours 12 minutes
24. $1\text{ h }45\text{ min} + 50\text{ min} + 1\text{ h }15\text{ min} + 2\text{ h }15\text{ min} + 55\text{ min} = 4\text{ h }180\text{ min}$, which is 7 hours.
25. She worked 7 hours 30 minutes. From 7:00 am to 3:35 pm is 8 hours 35 minutes. Subtract from that 65 minutes, or 1 hour 5 minutes, to get 7 hours 30 minutes.

26.

a. $2\text{ kg} = 2\,000\text{ g}$ $11\text{ kg }600\text{ g} = 11\,600\text{ g}$	b. $5\text{ L }200\text{ ml} = 5\,200\text{ ml}$ $3\text{ m} = 300\text{ cm}$	c. $8\text{ cm }2\text{ mm} = 82\text{ mm}$ $10\text{ km} = 10\,000\text{ m}$
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27. In four days, he jogs 15 km 200 m.
28. 1 L 650 ml
29. 16 m 20 cm
30. a. 63. Check: $63 \times 9 = 567$ b. 2 141. Check: $2\,141 \times 4 = 8\,564$
31. a. 9 r2 b. 8 r1 c. 6 r3
32. a. Three photos on the last page; five pages were full.
 b. Your neighbour should pay R51 because one metre of the fence costs R17.
33. a. It cost R99. First find $1/8$ of R264: $R264 \div 8 = R33$. Then to find $3/8$ of it, multiply $3 \times R33 = R99$.
 b. She needs 20 bags. $117 \div 6 = 19\text{ r}3$. Notice she also needs a bag for the three muffins that do not fill a bag.

34.

number	divisible by 1	divisible by 2	divisible by 3	divisible by 4	divisible by 5	divisible by 6	divisible by 7	divisible by 8	divisible by 9	divisible by 10
80	x	x		x	x			x		x
75	x		x		x					
47	x									

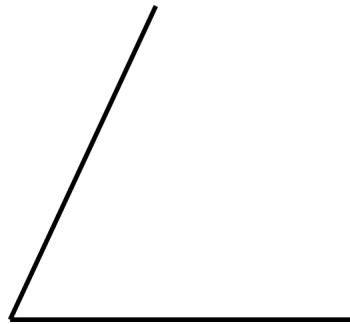
35.

<p>a. Is 5 a factor of 60? <u>Yes</u>, because $5 \times 12 = 60$.</p>	<p>b. Is 7 a divisor of 43? <u>No</u>, because $43 \div 7 = 6 \text{ r}1$ (the division is not even).</p>
<p>c. Is 96 divisible by 4? <u>Yes</u>, because $96 \div 4 = 24$ <u>(the division is even)</u>.</p>	<p>d. Is 34 a multiple of 7? <u>No</u>, because 34 is not in the multiplication table of 7. OR: No, because $34 \div 7 = 4 \text{ r}6$; the division is not even. OR: No, because there is no whole number you can multiply by 7 to get 34.</p>

36. Answers vary. For example: 2, 3, and 5. Here is a list of primes less than 100:
 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71, 73, 79, 83, 89, 97

37. a. 1, 2, 4, 7, 8, 14, 28, 56 b. 1, 2, 3, 6, 13, 26, 39, 78

38. 155°

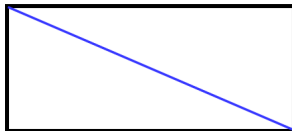


39. Check the student's answer.

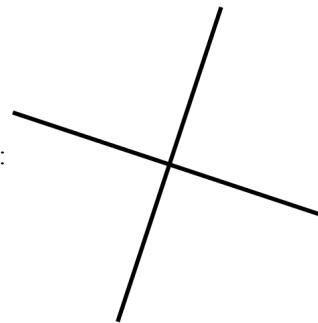
40. The answer varies. Check the student's answer. The sum of the angle measures should be 180° or very close.

41. $29^\circ + x = 180^\circ$; $x = 151^\circ$.

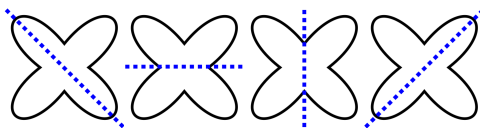
42. Right triangles.



43. The answer varies. Check the student's answer. For example:



44.





45. Use subtraction. $A = 9 \text{ m} \times 4 \text{ m} - 2 \text{ m} \times 3 \text{ m} = 36 \text{ m}^2 - 6 \text{ m}^2 = 30 \text{ m}^2$.

46. $\frac{5}{8} + \frac{5}{8} = 1 \frac{2}{8}$

47. There is still $\frac{2}{4}$ or $\frac{1}{2}$ of it left to put together.

48. a. $1 \frac{2}{5}$ b. $\frac{5}{6}$ c. 6

49.

 <p>a. Each piece is split into 2 new ones. $\frac{4}{5} = \frac{8}{10}$</p>	 <p>b. Each piece is split into <u>3</u> new ones. $\frac{2}{3} = \frac{6}{9}$</p>
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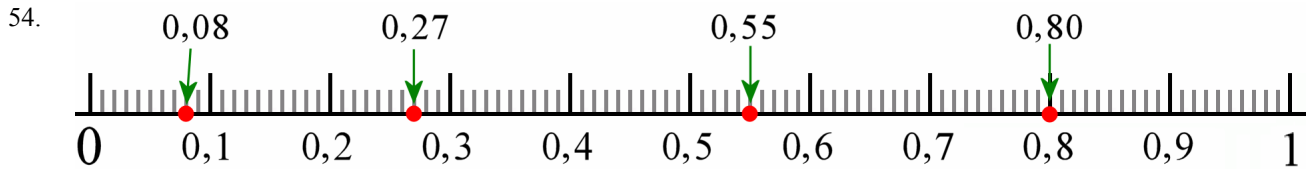
50.

a. $\frac{2}{3} = \frac{10}{15}$	b. $\frac{3}{5} = \frac{9}{15}$	c. $\frac{1}{6} = \frac{2}{12}$	d. $\frac{1}{3} = \frac{3}{9}$
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51. a. > b. > c. < d. <

52. $\frac{65}{100} < \frac{7}{10} < \frac{5}{4}$

53. a. $\frac{1}{8}$ b. $1 \frac{3}{5}$ c. $1 \frac{2}{12}$



55. a. 0,3 b. 3,9 c. 0,09 d. 7,45

56. a. $\frac{6}{10}$ b. $6 \frac{7}{10}$ c. $\frac{21}{100}$ d. $5 \frac{5}{100}$

57. a. < b. > c. < d. =

58. a. 13,01 b. 3,74