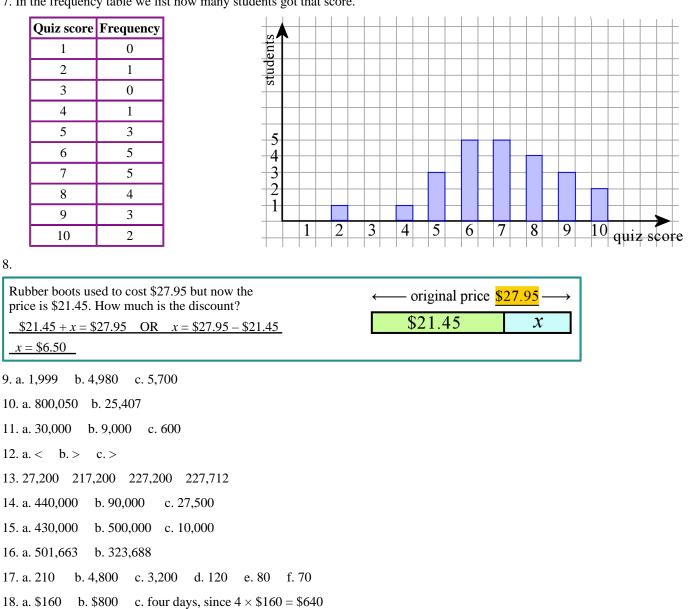
## **Math Mammoth Grade 4 End-of-Year Test Answer Key**

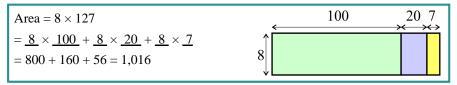
- 1. 1,980. Add to check: 1,980 + 543 + 2,677 equals 5,200.
- 2. a.  $\approx$  \$1 + \$9 + \$4 + \$9 = \$23 b. Her bill is 1.28 + 8.92 + 3.77 + 9.34 = 23.31. Her change is 30 - 23.31 = 6.69.
- 3. Estimate:  $5 \times \$0.90 + 2 \times \$1.20 = \$4.50 + \$2.40 = \$6.90$
- 4. a. 30; 84 b. 11; 14 c. 140; 19
- 5. a. \$35 + x = \$92; x = \$57 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, 1100, 1400, 1700
- 7. In the frequency table we list how many students got that score.



19. a. estimate 5 × 200 = 1,000. Exact: 980 b. estimate 40 × 40 = 1,600 or 30 × 40 = 1,200. Exact: 1,330 c. estimate 7 × 3,000 = 21,000. Exact: 22,316

d. estimate 90 × 20 = 1,800. Exact: 1,958

20.



- 21. a. Answers may vary. For example:  $400 26 \times 14 = 400 364 = 36$ . Or,  $26 \times 14 = 364$  and 400 364 = 36. b.  $24 \times 60$  minutes = 1,440 minutes
  - c. Answers may vary. For example:  $4 \times 375$  cm = 1,500 cm. Or, 375 cm + 375 cm + 375 cm + 375 cm = 1,500 cm
  - d. Answers may vary. For example:  $(\$277 \$58) \times 8 = \$1,752$ . Or, \$277 \$58 = \$219 and  $8 \times \$219 = \$1,752$ .
- 22. Answers may vary if the test is printed with "shrink to fit" or "fit to printable area", or because of slight variability in rulers, or because of measuring inaccurately. Please check students' answers.
  - a. 5 1/4 in. or 13 cm 3 mm. 13 cm 4 mm is also acceptable. b. 3 7/8 in. or 9 cm 8 mm. 9 cm 9 mm is also acceptable.
- 23. 6 hours 12 minutes
- 24. 1 h 45 min + 50 min + 1 h 15 min + 2 h 15 min + 55 min = 4 h 180 min, which is 7 hours.
- 25. She worked 7 hours 30 minutes. From 7:00 am till 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.	b.	с.
6 lb = 96 oz	5 gal = 20 qt	4 ft 2 in. = 50 in.
2 lb 11 oz = 43 oz	2 qt = 8 cups	7 yd = 21 ft

27.

a.	b.	с.
		8 cm 2 mm = 82 mm 10 km = 10,000 m

28. In four days, he jogs 15 km 200 m.

29.1 L 650 ml

30. 17 ft 8 in

31. a. 63. Check:  $63 \times 9 = 567$  b. 2,141. Check:  $2141 \times 4 = 8,564$ 

32. a. 9 R2 b. 8 R1 c. 6 R3

33. a. Three photos on the last page; five pages were full.b. Your neighbor should pay \$36, because one foot of the fence costs \$3.

34. a. It cost \$99. First find 1/8 of \$264:  $$264 \div 8 = $33$ . Then to find 3/8 of it, multiply  $3 \times $33 = $99$ . b. She needs 20 bags. 117  $\div 6 = 19$  R3. Notice she needs a bag also for the three muffins that don't fill a bag.

35.										
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	х	х		х	х			х		Х
75	Х		Х		х					
47	х									

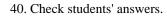
36.

a. Is 5 a factor of 60?	b. Is 7 a divisor of 43?
<u>Yes</u> , because $5 \times 12 = 60$ .	<u>No</u> , because $\underline{43} \div \underline{7} = 6 \text{ R1}$ (the division is not even).
c. Is 96 divisible by 4?	d. Is 34 a multiple of 7?
Yes, because $96 \div 4 = 24$ (the division is even).	<u>No</u> , because 34 is not in the multiplication table of 7. OR: No, because $34 \div 7 = 4$ R6; the division is not even. OR: No, because there is no whole number you can multiply by 7 to get 34.

37. 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

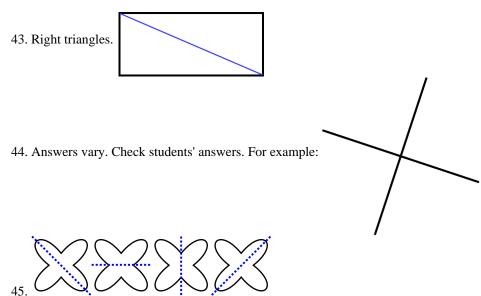
38. a. 1, 2, 4, 7, 8, 14, 28, 56 b. 1, 2, 3, 6, 13, 26, 39, 78

39. 155°



41. Answers vary. Check students' answers. The sum of the angle measures should be  $180^{\circ}$  or very close.

42.  $29^{\circ} + x = 180^{\circ}; \quad x = 151^{\circ}.$ 

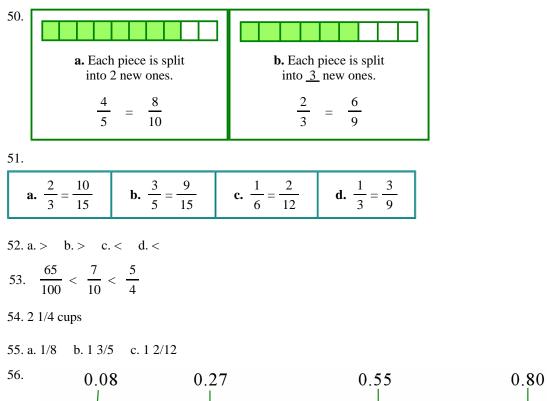


46. Use subtraction. A = 28 ft  $\times$  12 ft - 6 ft  $\times$  10 ft = 336 ft<sup>2</sup> - 60 ft<sup>2</sup> = 276 ft<sup>2</sup>.

$$47.\frac{5}{8} + \frac{5}{8} = 1\frac{2}{8}$$

48. There are still 2/4 or 1/2 of it left to do.

49. a. 1 2/5 b. 5/6 c. 6



0.6

0.7

0.8

0.9

1

0.5

57. a. 0.3 b. 3.9 c. 0.09 d. 7.45 58. a. 6/10 b. 6 7/10 c. 21/100 d. 5 5/100 59. a. < b. > c. < d. = 60. a. 13.01 b. 3.74

0.2

0.3

0.4

0.1

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