



Answer Key to the Math Mammoth Placement Test, Grades 1-3

1. a. 8, 7, 9 b. 10, 9, 8 c. 8, 10, 7 d. 10, 10, 8
 e. 13, 18, 11 f. 15, 11, 12 g. 12, 16, 12 h. 14, 14, 17
2. a. 5, 4, 1 b. 3, 3, 3 c. 4, 1, 3 d. 7, 1, 2
 e. 9, 8, 7 f. 8, 4, 8 g. 8, 8, 9 h. 9, 9, 6
3. a. 14, 24, 25, 36 b. 28, 40, 27, 35 c. 9, 16, 49, 32 d. 56, 30, 48, 54
4. Answers will vary; check the student's answer. For example:



5. a. 8 b. 10 c. 17
6. $17 = 10 + 7$
7. $7 - 4 = 3$
- 8.



9. The additions and subtractions can be in different order. Check the student's work.

$$2 + 7 = 9 \qquad 7 + 2 = 9$$

$$9 - 2 = 7 \qquad 9 - 7 = 2$$

10. $19 + 34 = 53$

11. $6 \times 2 = 12$. (It is also acceptable to write $2 \times 6 = 12$, but it is preferable to stick with the "number of groups times how many in each group" concept.)

12. $6 \div 2 = 3$ or $6 \div 3 = 2$ (both are correct)

13. $3 \times 5 = 15$ (It is also acceptable to write $5 \times 3 = 15$, but it is preferable to stick with the "number of groups times how many in each group" concept.)

14. $3 \times 6 = 18$ $18 \div 3 = 6$

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

15. a. 37 b. 267 c. 7,040

16. a. 85 b. 294
 c. 7,300 d. 8,042

17. a. 90 b. 20
c. 200 d. 2,000

18. a. < b. > c. > d. <

19. a. $417 < 447 < 714$ b. $990 < 8,009 < 8,909 < 9,098$

20. a. 78 b. 60 c. 120
d. 600 e. 320 f. 392
g. 5,700 h. 2,940

21. a. 5, 4 b. 5, 4 c. 1, 1

22. a. 5 b. 7 c. 9
d. 2 e. 7 f. 7

23. a. 88, 59 b. 52, 48 c. 96, 92

24. a. 67, 54 b. 31, 149 c. 15, 148

25. a. 33, 643 b. 620, 344 c. 310, 378

26. a. 83 b. 24 c. 722 d. 8,248

27. 748

28.

$\begin{array}{r} 6 \cancel{10} 13 \\ - 5 \cancel{0} 3 \\ \hline 1 \ 5 \ 7 \end{array}$	+	$\begin{array}{r} 1 \ 1 \\ \hline 1 \ 5 \ 7 \\ \hline 5 \ 4 \ 6 \\ \hline 7 \ 0 \ 3 \end{array}$
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Check:

29. a. = 34 b. $x = 824$

30. a. They have 19 cars together.
b. Robert has 5 more cars than Luis.

31. Andy drew 16 stars. ($8 + 3 + 5 = 16$)

32. Each child got 7 apples. ($5 + 9 = 14$, and half of 14 is 7.)

33. He still needs \$6 more. ($\$16 + \$10 = \26; $\$26 + \$6 = \$32$)

34. 324 chickens are young ($450 - 126 = 324$)

35. A round trip is 436 miles ($218 + 218 = 436$)

36. 160 miles. Note that the half-way point is at 150 miles. They stopped at 140 miles (10 miles before 150 miles).

37. a. $\$78 \approx \80 ; $\$459 \approx \460

b. He can buy the phone after 6 weeks. ($\$80 + \$80 + \$80 + \$80 + \$80 + \$80 = \$480$ or $6 \times \$80 = \480)

38. $\$545 + \$52 = \$597$; $\$597 - \$310 = \$287$. He needs \$287 more.

39. a. $7 \times 4 = 28$ legs

b. $8 \times 4 + 6 \times 2 = 44$ legs

40. a. 10 b. 8 c. 8
d. 9 e. 5 f. 40

41. a. 75 b. 240 c. 300

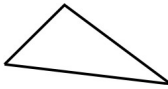
42. a. $3 \times 12 = 36$. She needs 36 rolls.

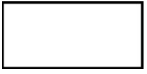
b. $8 \times 4 = 32$. You need 8 tables.

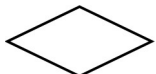
c. $3 \times \$8 + 3 \times \$6 = \$42$. It would cost \$42.

43. a. $7 \times 4 = 28$. She will need 7 bags.
 b. $(\$16 + \$14) \div 3 = \$10$. Each child paid \$10.00.
 c. $6 \times 10 + 9 = 69$ (or $7 \times 10 - 1 = 69$). There are 69 passengers.

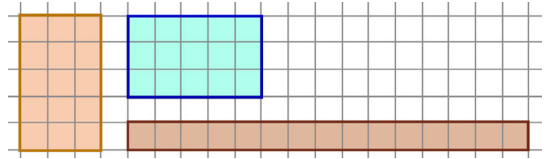
44. a. square b. pentagon

45. a. Drawings will vary. Check the student's drawing. For example: 

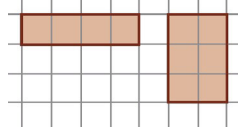
b. Drawings will vary. It should be a rectangle that is not a square. For example: 

c. Drawings will vary. Check the student's drawing. For example: 

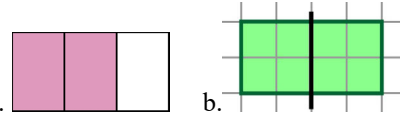
46. Perimeter 22 units; area 24 square units or squares.
 Note that the student should also give the "units" and "square units" or "squares", not just a plain number.



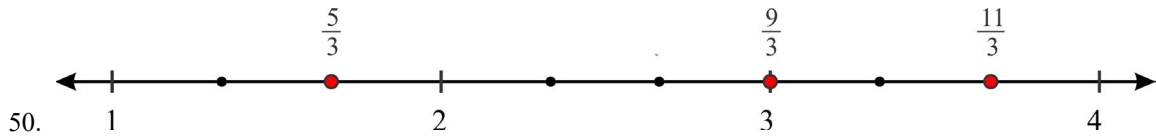
47. a. The sides of the rectangle could be 5 and 3, or 15 and 1. Some examples are shown on the right.



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

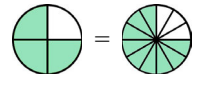
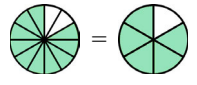




48. a.  b. 
 49. a. $\frac{3}{8}$ b. $\frac{5}{6}$ c. $\frac{8}{3}$



51. $\frac{6}{4}$ $\frac{8}{8}$ $\frac{2}{8}$ $\frac{13}{3}$ $\frac{24}{4}$ $\frac{20}{6}$

52.

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