

# Grade 4 · Multiplicative Comparison and Multi-Step Problems · Test Answer Key

Common Core 4.OA.A.1, 4.OA.A.2, 4.OA.A.3 · mathovore.fr

This answer key gives the worked solution and the scoring guide for each question, out of 20 points. Award points for correct reasoning as well as correct answers. Accept any equivalent equation, and a total of 16 points or more shows strong understanding.

## Grade 4 Common Core: 4.OA.A.1 · 4.OA.A.2 · 4.OA.A.3

### Question 1: Write the comparison (2 points)

(a) 54 is 6 times as many as 9 (or 54 is 9 times as many as 6). (b)  $45 = 5 \times 9$ , true because  $5 \times 9 = 45$ .

*Scoring: 1 point for a correct sentence with the numbers in the right places. 1 point for the equation.*

### Question 2: Times as many (2 points)

(a)  $8 \times 7 = 56$ . (b)  $7 \times n = 63$ , so  $n = 63 \div 7 = 9$ .

*Scoring: 1 point for 56. 1 point for  $n = 9$ .*

### Question 3: More or times (2 points)

(a)  $20 - 5 = 15$  more cards. (b)  $20 \div 5 = 4$ , so Sam has 4 times as many cards.

|     |              |              |              |              |      |
|-----|--------------|--------------|--------------|--------------|------|
| Ria | <div>5</div> |              |              |              |      |
| Sam | <div>5</div> | <div>5</div> | <div>5</div> | <div>5</div> | = 20 |

Sam has 4 groups of 5.

*Scoring: 1 point for 15. 1 point for 4.*

### Question 4: Garden plants (2 points)

(a)  $5 \times 15 = 75$  plants. (b) Five times as many multiplies 15 by 5 to get 75. Five more adds 5 to

15 to get only 20.

*Scoring: 1 point for 75. 1 point for an explanation that times means multiplying and more means adding.*

### Question 5: Library books (2 points)

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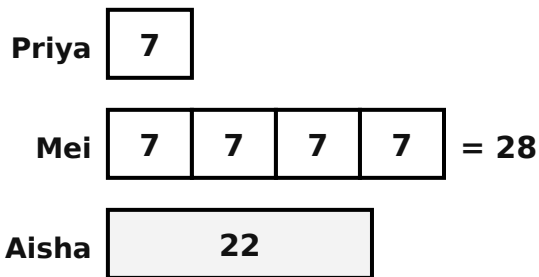
(a)  $7 \times p = 84$ . (b)  $p = 84 \div 7 = 12$ . Check:  $7 \times 12 = 84$ .

*Scoring: 1 point for the equation. 1 point for 12 poetry books.*

### Question 6: Bracelets (3 points)

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(a)  $4 \times 7 = 28$ . (b)  $28 - 6 = 22$ . (c)  $7 + 28 + 22 = 57$ .



Mei has 28 and Aisha has 22.

*Scoring: 1 point for each part. In part (c), award the point if the sum is correct for the student's answers to (a) and (b).*

### Question 7: Concert tickets (3 points)

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(a)  $3 \times 8 = 24$ , so an adult ticket costs \$24. (b)  $t = 2 \times 24 + 3 \times 8$ . (c)  $2 \times 24 = 48$  and  $3 \times 8 = 24$ , so  $t = 48 + 24 = 72$ .

The family spends **\$72**.

*Scoring: 1 point for \$24. 1 point for an equation that uses 2 adult tickets and 3 child tickets. 1 point for  $t = 72$ .*

### Question 8: Can collection (3 points)

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(a)  $3 \times 47 = 141$ . (b)  $141 - 25 = 116$ . (c)  $50 \times 3 = 150$ , which is close to 141, so the answer is reasonable.

*Scoring: 1 point for each part. Part (c) needs the estimate 150 and a statement that 141 is close to it.*

### Question 9: Add or multiply (1 point)

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(a) 12 feet taller compares by adding. (b) 3 times as tall compares by multiplying.

*Scoring: 1 point only if both are correct.*

|                  |
|------------------|
| <b>Total</b>     |
| <b>20 points</b> |