

Grade 4 - Multiplicative Comparison - Answer Key

Common Core 4.OA.A.1, 4.OA.A.2 · maths-pdf.fr/en/

Use this key to check the comparison problems. Each solution names the type of comparison, shows the equation, and gives the answer in bold. Bar models are repeated where they make the solution clearer.

Grade 4 · Common Core State Standards: **4.OA.A.1, 4.OA.A.2**

Exercise 1 - Times as many

Jamal = 4 times 5.

$$j = 4 \times 5 = 20$$

20 stickers

Exercise 2 - Read an equation

24 is 6 times as many as 4.

Check: $6 \times 4 = 24$.

24 is 6 times as many as 4.

Exercise 3 - Write an equation

The big number is 35, the number of times is 5, and the unit is 7.

$$35 = 5 \times 7$$

Exercise 4 - Two sentences

The factors 6 and 7 can each be the number of times.

42 is 6 times as many as 7. Also, 42 is 7 times as many as 6.

42 is 6 times as many as 7; 42 is 7 times as many as 6.

Exercise 5 - More or times

(A) "more than" is additive. (B) "times as many" is multiplicative. (C) "twice as many" means 2 times as many, so it is multiplicative. (D) "fewer than" is additive.

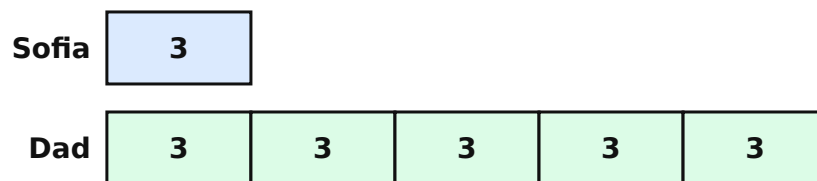
A and D are additive. B and C are multiplicative.

Exercise 6 - Ribbon length

$$r = 6 \times 7 = 42$$

42 inches

Exercise 7 - Bar model: miles



Five bars of 3 miles.

$$d = 5 \times 3 = 15$$

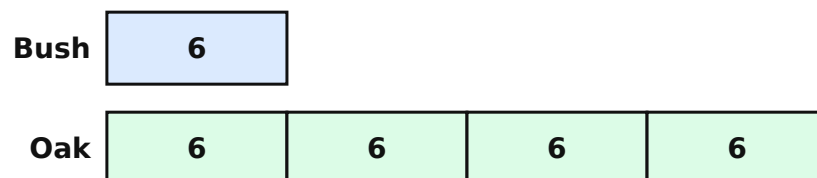
15 miles

Exercise 8 - Use a letter

$$p = 7 \times 8. \text{ Since } 7 \times 8 = 56, p = 56.$$

56 pencils

Exercise 9 - Unknown smaller amount



Four bars of 6 feet make 24 feet.

$$24 = 4 \times b. \text{ Divide: } b = 24 \div 4 = 6.$$

$$\text{Check: } 4 \times 6 = 24.$$

6 feet

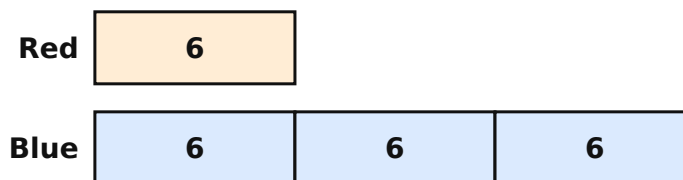
Exercise 10 - How many times?

$$96 = n \times 24. \text{ Divide: } n = 96 \div 24 = 4.$$

$$\text{Check: } 4 \times 24 = 96.$$

4 times as much

Exercise 11 - Compare bars



Three bars of 6 make 18.

$18 = n \times 6$, so $n = 18 \div 6 = 3$. The picture shows three red-size bars in the blue bar.

3

Exercise 12 - Baseball cards

$$63 = n \times 9. n = 63 \div 9 = 7.$$

$$\text{Check: } 7 \times 9 = 63.$$

7 times as many

Exercise 13 - Both comparisons

Brother (additive): $12 + 4 = 16$.

Cousin (multiplicative): $4 \times 12 = 48$.

Brother 16 books; cousin 48 books

Exercise 14 - Twice as many

Maya: $2 \times 15 = 30$.

Total: $15 + 30 = 45$.

45 apples

Exercise 15 - Honey jars

Saturday: $6 \times 8 = 48$.

In all: $8 + 48 = 56$.

48 jars on Saturday; 56 jars in all

Exercise 16 - Little League runs

Eagles: $3 \times 7 = 21$.

How many more: $21 - 7 = 14$.

14 more runs

Exercise 17 - School store prices

$18 = n \times 2$. $n = 18 \div 2 = 9$.

Check: $9 \times 2 = 18$.

9 times as much

Exercise 18 - Road trip days

Tuesday: $4 \times 45 = 180$. Wednesday: $3 \times 45 = 135$.

Total: $45 + 180 + 135 = 360$.

360 miles

Exercise 19 - Weights

Potatoes: $3 \times 5 = 15$ pounds.

Watermelon: $2 \times 15 = 30$ pounds.

Potatoes 15 pounds; watermelon 30 pounds

Exercise 20 - Find the mistake

"Times as many" means multiplication, but Ethan added. Also $6 + 5 = 11$, not 30.

Correct: $30 = 6 \times 5$.

$$30 = 6 \times 5$$

Exercise 21 - Bake sale trays

Second table: $4 \times 9 = 36$.

Third table: $36 - 5 = 31$.

31 trays