WONDERLEARNERZ PRIMARY ACADEMY â€" OFFICIAL ANSWER KEY & MARKING SCHEME

Fractions of a Number: Worksheet 4 [ANSWER KEY]

Grade 5 | Mathematics | Ch 5: Fractions of a Number | Total Marks: 19 | Time: 45 Minutes

Q1. Find 3/4 of 72. [1 Mark]

Correct Answer: 54

Explanation: Divide by 4 (72 / 4 = 18), then multiply by 3: 54.

Q2. Evaluate 2/5 of 150 km. [1 Mark]

Correct Answer: 60 km

Explanation: 150 / 5 = 30; 30 x 2 = 60 km.

Q3. What is 5/6 of 72? [1 Mark]

Correct Answer: 60

Explanation: 72 / 6 = 12; 12 x 5 = 60.

Q4. Calculate 3/8 of 64. [1 Mark]

Correct Answer: 24

Explanation: 64 / 8 = 8; 8 x 3 = 24.

Q5. At the Eco-Friendly Solar Park, an orchard harvests 120 baskets of apples. If 3/5 of the baskets are red apples and the rest are green, how many baskets of red apples were harvested? [1 Mark]

Correct Answer: 72 baskets

Explanation: 120 / 5 = 24. 24 x 3 = 72 baskets of red apples.

Q6. A school sports club has 80 members. 5/8 of the members play soccer. How many members play soccer? [1 Mark]

Correct Answer: 50 members

Explanation: 80 / 8 = 10. 10 x 5 = 50 soccer players.

Q7. A charity fundraiser collected $360. If 1/4 was spent on venue setup and 1/3 on food, how much total money was spent on these two items? [1 Mark]

Correct Answer: $210

Explanation: Venue: 360 / 4 = $90. Food: 360 / 3 = $120. Total spent = 90 + 120 = $210.

Q8. Find the mystery quantity: 2/3 of [?] = 18. [1 Mark]

Correct Answer: 27

Explanation: If 2 parts = 18, then 1 part = 9. Whole quantity = 9 x 3 = 27.

Q9. Fill in the missing fraction: [?] of 40 = 25. [1 Mark]

Correct Answer: 5/8

Explanation: 25/40 simplified by dividing by 5 gives 5/8.

Q10. Ben calculates 2/3 of 18 as: '18 / 2 = 9, then 9 x 3 = 27.' What did Ben do wrong and what is the correct answer? [1 Mark]

Correct Answer: 12

Explanation: Ben divided by the numerator and multiplied by denominator. He should divide by 3 (18/3=6) and multiply by 2 (6x2=12).

Q11. Ella writes: '3/4 of 20 is equal to 3/4 + 20 = 20 3/4.' Correct Ella's conceptual misunderstanding and provide the right answer. [1 Mark]

Correct Answer: 15

Explanation: 'Of' indicates multiplication/grouping, not addition. 20 / 4 = 5; 5 x 3 = 15.

Q12. Explain why finding 1/4 of 48 gives the same result as dividing 48 by 4. [2 Marks]

Correct Answer: A fraction 1/n represents one equal share out of n equal parts. Dividing 48 into 4 equal shares distributes 12 into each part, which is mathematically identical to 1/4 of 48.

Explanation: Multiplying by 1/n is operationally equivalent to division by n.

Q13. Show why 3/5 of 50 is equal to (3 x 50) / 5 and explain whether order of operations matters. **[2 Marks]**

Correct Answer: 3/5 of 50 = (50 / 5) x 3 = 10 x 3 = 30. Also (3 x 50) / 5 = 150 / 5 = 30. Multiplication and division have equal priority, so order does not change the result.

Explanation: Multiplication and division are associative and commutative in rational scaling.

Q14. In a botanical garden, 2/5 of the 150 trees are flowering trees, and 1/3 of the flowering trees are cherry blossoms. How many cherry blossom trees are there? **[2 Marks]**

Correct Answer: 20 trees

Explanation: Flowering trees = 150 x 2/5 = 60. Cherry blossoms = 60 x 1/3 = 20 trees.

Q15. A runner has completed 3/7 of a marathon course and has 24 km remaining. What is the total length of the marathon course? **[2 Marks]**

Correct Answer: 42 km

Explanation: Remaining fraction = 1 - 3/7 = 4/7. If 4/7 = 24 km, then 1/7 = 6 km. Total course = 6 x 7 = 42 km.