

Grade 4 • Unit 5 Worksheet

Multiplicative Comparison and Measurement

Name: _____

Date: _____

Part A • Times as Many

1. Mai has 4 stickers. Lin has 3 TIMES as many stickers as Mai. Draw a tape diagram and find how many Lin has.

Equation: _____ $\times$ _____ = _____

Lin has _____ stickers.

2. Diego read 35 books. Sara read 5 books. How many TIMES as many books did Diego read as Sara?

Equation: _____ $\times$ 5 = 35 $\rightarrow$ _____ = $35 \div 5$

Answer: _____ times as many

3. Han ran 240 meters. Pat ran 8 times as far. How far did Pat run?

Show your work (tape diagram or equation):

Pat ran _____ meters.

Part B • Compare: Multiplicative vs. Additive

4. Lin has 6 marbles. Sam has 24 marbles.

How many MORE marbles does Sam have? (Additive) _____

How many TIMES as many does Sam have? (Multiplicative) _____

What is the DIFFERENCE between these two questions?

5. Sara claims: "6 is 3 more than 3, and 6 is also 3 times as much as 3." Is Sara right? Explain.

Part C • Measurement Conversions

6. Convert each measurement.

$$3 \text{ m} = \underline{\hspace{2cm}} \text{ cm}$$

$$2 \text{ km} = \underline{\hspace{2cm}} \text{ m}$$

$$4 \text{ kg} = \underline{\hspace{2cm}} \text{ g}$$

$$5 \text{ L} = \underline{\hspace{2cm}} \text{ mL}$$

$$2 \text{ ft} = \underline{\hspace{2cm}} \text{ in}$$

$$3 \text{ hr} = \underline{\hspace{2cm}} \text{ min}$$

7. Diego says, "To go from kilometers to meters, I multiply by 1,000 because 1 km is 1,000 times as long as 1 m." Use Diego's pattern to write a sentence about ANOTHER conversion.

Part D • Multi-Step Story Problems

8. Mai's dog weighs 14 pounds. Pat's dog weighs 3 times as much. How many OUNCES does Pat's dog weigh? (1 lb = 16 oz)

Show your work:

Answer: ounces

9. A rectangle is 4 cm long and 3 cm wide. Another rectangle has BOTH dimensions 5 times as long. What is the PERIMETER of the second rectangle (cm and m)?

Show your work:

Perimeter: _____ cm = _____ m

Part E • Error Analysis and Reasoning

10. Han wrote: " $6\text{ m} + 200\text{ cm} = 206\text{ m}$ " — is this right? Find and explain the error.

Correct answer: _____

11. Why is it true that the BIGGER the unit, the FEWER of them you need to measure the same length? Give an example.

12. Write a multiplicative-comparison story where the answer is 'Andre has 32 books.' Then solve it.

My problem:

My equation and solution:
