LESSON MAKER PRO

Length Difference Detectives

Find how much longer one object is than another.

GRADE 2 · NY-2.MD.4

NY-2.MD.4 "Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard "length unit.""

NAME _____ DATE _____

FIND THE DIFFERENCE

First, find the longer length. Subtract the shorter length from the longer length, then write the length unit in your answer.

WORKED EXAMPLE

A yellow straw is 13 cm long. A purple straw is 7 cm long. How much longer is the yellow straw?

1. Start with the longer length: 13 cm.
2. Subtract the shorter length: 13 - 7.
3. 13 - 7 = 6.

Answer: The yellow straw is 6 cm longer.

PRACTICE 5 problems

1 A toy train is 12 cm long. A toy plane is 8 cm long. How much longer is the toy train?

ANSWER _____

2 A red crayon is 16 cm long. A blue crayon is 11 cm long. How much longer is the red crayon?

ANSWER _____

3 One puppy stick is 18 cm long. Another puppy stick is 15 cm long. How much longer is the first stick?

ANSWER _____

4 A stack of toy blocks is 10 cm tall. Another stack is 2 cm tall. How much taller is the first stack?

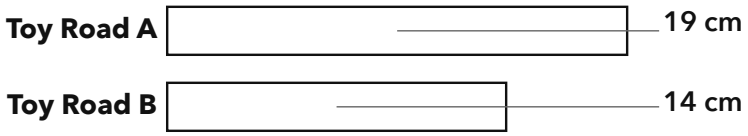
ANSWER _____

5 A pink ribbon is 17 cm long. A white ribbon is 12 cm long. How much longer is the pink ribbon?

ANSWER _____

APPLY IT Show your work

1 Jada makes two toy roads. Look at the lengths in the diagram. How much longer is Toy Road A than Toy Road B?



ANSWER _____

2 Omar has two paper airplanes. Look at the wingspans in the diagram. How much longer is Airplane 1 than Airplane 2?



ANSWER _____

3 Measure and compare. Teacher: provide a centimeter ruler and two straight paper strips of different whole-centimeter lengths, each shorter than the ruler. Label them A and B without giving their lengths. Measure both from the zero mark to the other end. Record A=___ cm and B=___ cm. Name the longer strip, subtract the shorter length, and write how much longer it is in cm. Have your teacher check your measurements.

WORK SPACE

ANSWER _____

CHALLENGE One step up

A jump rope is 25 cm long. A ribbon is 17 cm long. Nia says the jump rope is 42 cm longer because she added the lengths. Is Nia right? Explain how to find how much longer the jump rope is.

WORK SPACE AND ANSWER

ANSWER KEY

Length Difference Detectives

GRADE 2 · NY-2.MD.4

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	A toy train is 12 cm long. A toy plane is 8 cm long. How much longer is the toy train?	**4 cm**
2	A red crayon is 16 cm long. A blue crayon is 11 cm long. How much longer is the red crayon?	**5 cm**
3	One puppy stick is 18 cm long. Another puppy stick is 15 cm long. How much longer is the first stick?	**3 cm**
4	A stack of toy blocks is 10 cm tall. Another stack is 2 cm tall. How much taller is the first stack?	**8 cm**
5	A pink ribbon is 17 cm long. A white ribbon is 12 cm long. How much longer is the pink ribbon?	**5 cm**

PART 2 · APPLY IT

1. **5 cm** Subtract the shorter road length from the longer road length: 19 - 14 = 5. Toy Road A is 5 cm longer.
2. **9 cm** Subtract the shorter wingspan from the longer wingspan: 21 - 12 = 9. Airplane 1 is 9 cm longer.
3. **Measurements vary with the supplied strips. Record both measured lengths, identify the longer strip and subtract shorter from longer; state the difference in cm.** Observe zero alignment and endpoint readings. Check both recorded measurements against the strips, then verify subtraction and unit. Example: measured A=14cm and B=9cm gives A longer by5cm. Accept other correct observed lengths/differences; supplied practice lengths do not substitute for this measurement.

CHALLENGE

No. Subtract 17 cm from 25 cm. The jump rope is 8 cm longer.

Accept answers written with the correct unit, cm. For the challenge, accept an explanation that says to subtract the shorter length from the longer length.