

Part to Part, Part to Whole

ELA + MATH · WORD STUDY

E3 Math · Day 19

WRITE YOUR NAME — one letter per box, straight and neat

Date: _____

Score: ____ / 10

Yesterday you said ratios out loud. Today you write them — with the word **to** and with a **colon**. Watch for the trap: one situation can hide two different true ratios. 8 mallards and 5 ruddy ducks is 8 : 5 — but it is also 8 : 13, because 13 ducks is the whole flock. Both are correct; only one answers the question asked.

DO NOW · SILENT START

3 min

From the warm-up: **Which would you rather?** Recipe A uses 2 cups cheese for every 3 cups macaroni. Recipe B uses 3 cups cheese for every 5 cups macaroni. Pick the cheesier one and write one sentence that names both quantities.

TURN & TALK

2 min

Compare picks with your partner. If you disagree, do not vote — each of you say the comparison out loud until you find the one you are each looking at.

Frames: "I chose _____ because it has _____ for every _____." ·
"The whole is _____ because _____."

Section A · Guess the Word

Fill in the blanks to find the word that means "all of the parts added together."

The SAME missing letter goes in both dashed boxes. Write it here: _____

8 mallards + 5 ruddy ducks = _____ ducks in the whole flock.

The **whole** is the total of all the parts. A part-to-whole ratio always compares one part against that total — never against the other part.

Section B · Meet the Parts and the Whole

Use the word bank to complete each sentence.

part to part

part to whole

whole

colon

- 1 A ratio that compares one group to another group is a _____ ratio.

Example: mallards to ruddy ducks = 8 to 5.

- 2 A ratio that compares one group to the total is a _____ ratio.

Example: mallards to all ducks = 8 to 13.

- 3 The total of all the parts together is called the _____.

Example: 8 + 5 = 13 ducks.

- 4 The symbol : used to separate the two quantities is called a _____.

Example: 8 : 5 is read "eight to five."

Section C · Try It: Two Ratios, One Situation

Whatever is named first in the words is written first in the numbers. Study the worked example, then find all three ratios in your own problem.

WORKED EXAMPLE

8 mallards · 5 ruddy ducks

whole = 8 + 5 = **13 ducks**

mallards to ruddy (part to part) = **8 : 5**

mallards to all ducks (part to whole) = **8 : 13**

ruddy to all ducks (part to whole) = **5 : 13**

↑ 8 : 5 and 8 : 13 are both true. They answer different questions.

YOUR TURN

A bag holds **3 red marbles and 5 blue marbles** — 3 red for every 5 blue.

whole = _____ marbles

red to blue (part to part) = _____ : _____

red to all marbles (part to whole) = _____ : _____

blue to all marbles (part to whole) = _____ : _____

Now write one of them as a sentence that names both quantities:

REFINE · SUMMARY — One situation, more than one true ratio. Part to part compares two groups; part to whole compares one group to the total of every part. Read the question to find out which one is being asked for — the numbers alone will not tell you. Next: catching the ratio that is written correctly but **compares the wrong two things**.

☆ Name both quantities, every time! ☆

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Word Study Meets Number Sense · Day 19 wkst · Prepares students for Refine: Ratio Concepts (6.RP.A.1, MP.3)

E3 Math · Day 19 CCSS