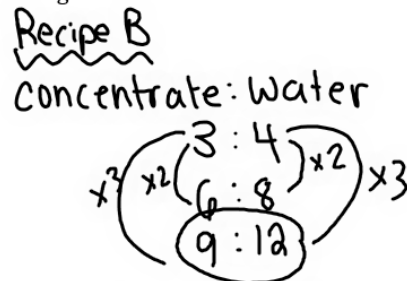
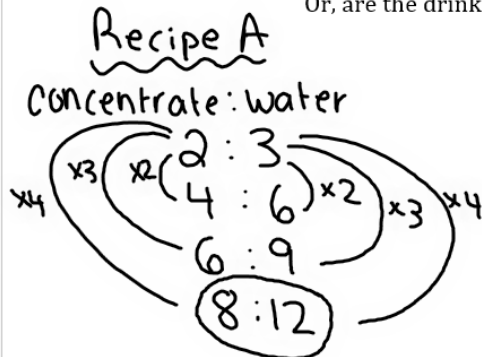


5.7 Comparing Ratios – Notes

Investigation: Recipes A for punch calls for 2 cans of concentrate and 3 cans of water.
 Recipes B for punch calls for 3 cans of concentrate and 4 cans of water.

In which recipe is the punch stronger?
 Or, are the drinks the same strength?

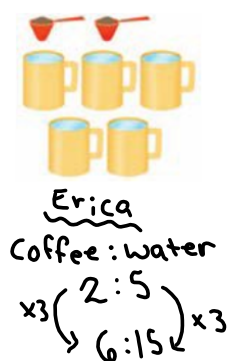


Recipe B is stronger since it uses more cans of concentrate for the same amount of water as Recipe A.

Example (1): Which coffee is stronger?

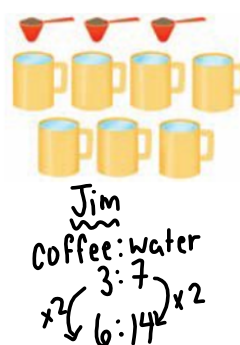
Example (1): Which coffee is stronger?

Erica makes her coffee with 2 scoops of coffee to 5 cups of water.



$$\times 7 \begin{pmatrix} 2:5 \\ 14:35 \end{pmatrix} \times 7$$

Jim makes his coffee with 3 scoops of coffee to 7 cups of water.



Jim's coffee is stronger. He uses less water for the same amount of coffee as Erica

$$\times 5 \begin{pmatrix} 3:7 \\ 15:35 \end{pmatrix} \times 5$$

Jim's is stronger because he use more coffee for the same amount of water.

Example (2): The recommended seeding on a package of grass seed is 200g per 9 m². Carey spread 150 g over 6.5 m².

Is this more than, equal to, or less than the recommended seeding?

Recommended
g: m²
200: 9
÷9 (200: 9) ÷9
22.2: 1

x3 (200: 9)
600: 27

Carey
g: m²
150: 6.5
÷6.5 (150: 6.5) ÷6.5
23.08: 1

Carey uses more than the recommended amount.

x4 (150: 6.5)
600: 26

Example (3): Write each part-to-part ratio as a part-to-whole ratio, then as a fraction and percent. Which part-to-whole ratio is greater?

i) 2:3

2: (2+3)

2: 5 part-to-whole

$\frac{2}{5}$

0.4

40%

ii) 4:3

4: (4+3)

4: 7

$\frac{4}{7}$

0.5714

57.14%

top ÷ bottom

x100

*Only p-to-w ratios can be written as fractions and percents.

Example (4): A contractor brought 2 shades of yellow paint for his clients to see.

Shade 1 is made by mixing 5 cans of yellow paint with 3 cans of white paint.

Shade 2 is made by mixing 7 cans of yellow paint with 4 cans of white paint.

The clients want the lighter shade.

Which shade should they choose?

What assumptions do you make?

Shade 1

yellow: white

$$\times 4 \left(\begin{array}{l} 5 : 3 \\ 20 : 12 \end{array} \right) \times 4$$

Shade 1 is lighter
Since it uses less yellow
for the same amount of
white.

$$\div 3 \left(\begin{array}{l} 5 : 3 \\ 1.6 : 1 \end{array} \right) \div 3$$

$$\div 4 \left(\begin{array}{l} 7 : 4 \\ 1.75 : 1 \end{array} \right) \div 4$$

Shade 2

yellow: white

$$\times 3 \left(\begin{array}{l} 7 : 4 \\ 21 : 12 \end{array} \right) \times 3$$