



Warm Up Grade 8
April 3, 2017



1) The recommended seeding on a package of grass seed is 200 g per 9 m². Carey spread 150 g over 6.5 m². Is this more than, equal to, or less than the recommended seeding? How do you know? (Make a term 1)

Package
Grass : Area
 $200g : 9m^2$
 $22.2g : 1m^2$

Idid
Grass : Area
 $150g : 6.5m^2$
 $23.07g : 1m^2$
 ↑
 Too much added
 Since $22.2 < 23.07$
 $600g : 26m^2$

Method 2
 $600g : 27m^2$

2) 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?

Shade 1
 Y : W
 $5 : 3$
 $20 : 12$

Shade 2
 Y : W
 $7 : 4$
 $21 : 12$



Lighter
 Since less yellow with same amount of white
 Darker
 Since more yellow

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10. Alison
 6 of 13 shots
 $\times 9$ $\times 9$

54 of 117

$$\frac{6}{13} = 0.46$$

or
 46% of
 shots

Nadhu
 5 of 9 shots
 $\times 13$ $\times 13$

65 of 117

$$\frac{5}{9} = 0.555\ldots$$

or 56% of
 shots

Nadhu played better.

11. Calgary
 2 pizza for 3 people
 $\div 3$ $\div 3$

$\frac{2}{3}$ pizza / person
 to : 15

0.666...

Alber ta
 3 pizzas for 5 people
 $\div 5$ $\div 5$

$\frac{3}{5}$ / person
 9 : 15

$\frac{6}{10}$ or 0.6

The Calgary team
 received more pizza per person

(b) Yes, you could find what
 percent of a pizza each person
 received.

12

Recipe A		Recipe B
vinegar : oil		vinegar : oil
150 : 250		225 : 400
450 : 750		450 : 800

$\frac{5}{25}$ $\frac{3}{5}$ $\frac{9}{16}$
 $\frac{15}{75}$ $\frac{41}{80}$ $\frac{45}{80}$

less oil than B so stronger vinegar

Recipe A has a stronger vinegar taste, they both have 450ml of vinegar, but A has less oil.

13. Ms Arbuckle

Fiction : Non Fiction

7 : 5

42 : 30

Fiction

Mr. Albright

Fiction | Non Fict.

4 : 3

40 : 30

Fiction

b) Ms Arbuckle

$\frac{30}{72} = 0.42$ or 42%

Mr. Albright

$\frac{30}{70} = 0.43$ or 43%

14. A conc : water

2 : 1

B conc : water

3 : 2

b) A 6 : 3

6 : 4

then add one can of water to A to make the conc : water the same.

15. a)	red : yellow	b)	red : yellow
A	4 : 12		1 : 3
B	3 : 15		1 : 5
C	2 : 3		1 : 1.5

c) Shade C will have the most red

d) Shade B will have the most yellow.

16. Cage A
White : Brown
5 : 6

Cage B
White : Brown
7 : 5

Marcel says B has more brown,
 $\frac{6}{11} > \frac{1}{2}$ and $\frac{5}{12} < \frac{1}{2}$

He is correct, he compared brown to all.

17. Glider A
14 : 3
56 : 12

Glider B
15 : 4
45 : 12

Glider A will move forward 56 m for every 12 m of altitude lost

Glider B will move forward 45 m for every 12 m of altitude lost.

Glider A will cover the most horizontal distance.

18. One box
Hockey : Basketball : All
4 : 3 : 7
20 : 15 : 35

2nd box
H : B : All
3 : 2 : 5
21 : 14 : 35

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4. (a) $t : 18 = 6 : 3$
 $\star 36 : 18 = 6 : 3$
 $t = 36$

(c) $x : 15 = 2 : 3$
 $\star 10 : 15 = 2 : 3$
 $x = 10$

(e) $6 : c = 2 : 11$
 $\star 6 : 33 = 2 : 11$
 $c = 33$

5. (a) $5 : t = 15 : 36$
 $\star 5 : 12 = 15 : 36$
 $t = 12$

(c) $120 : 70 = 12 : k$
 $\star 120 : 70 = 12 : 7$
 $k = 7$

(e) $27 : 63 = p : 7$
 $27 : 63 = 3 : 7$
 $p = 3$

(b) $v : 60 = 3 : 10$
 $18 : 60 = 3 : 10$
 $v = 18$

(d) $s : 28 = 9 : 4$
 $63 : 28 = 9 : 4$
 $s = 63$

(f) $39 : b = 3 : 2$
 $39 : 26 = 3 : 2$
 $b = 26$

(b) $45 : 72 = 5 : n$
 $45 : 72 = 5 : 8$
 $n = 8$

(d) $81 : 27 = 9 : m$
 $81 : 27 = 9 : 3$
 $m = 3$

(f) $8 : s = 64 : 80$
 $8 : 10 = 64 : 80$
 $s = 10$

6. (a) $1 : 6 = a : 54$

$$1 : 6 = 9 : 54$$

$$a = 9$$

(b) $3 : 8 = e : 40$

$$3 : 8 = _ : 40$$

$$e = 15$$

(c) $2 : 15 = f : 75$

$$2 : 15 = _ : 75$$

$$f = 10$$

(d) $42 : 36 = g : 6$

$$42 : 36 = _ : 6$$

$$g = 7$$

(e) $3 : 7 = 30 : p$

$$3 : 7 = 30 : _$$

$$p = 70$$

(f) $26 : 65 = 2 : r$

$$26 : 65 = 2 : _$$

$$r = 5$$

7. (a) $18 : a = 14 : 21$

$$18 : _ = 2 : 3$$

$$a = 27$$

(b) $35 : b = 15 : 12$

$$35 : _ = 5 : 4$$

$$b = 28$$

(c) $m : 18 = 18 : 27$

$$_ : 18 = 6 : 9$$

$$m = 12$$

(d) $88 : 33 = h : 6$

$$8 : 3 = _ : 6$$

$$h = 16$$

(e) $6 : 8 = j : 44$

$$3 : 4 = _ : 44$$

$$j = 33$$

(f) $15 : 42 = 20 : w$

$$60 : 168 = 20 : w$$

$$\div 3 \quad \div 3$$

$$w = 56$$

$$15 : 42 = 20 : w$$

$$5 : 14 = 20 : _$$

$$\times 4 \quad \times 4$$

$$w = 56$$



Solving Ratio Problems



Have students work on Investigate pg. 287

Recipe for Apple pie that serves 6 people.

500 ml flour \rightarrow 350 mL

200 ml of margarine $\div 1.4285 \rightarrow$ 140 mL

500 g sliced apples \rightarrow 350g of apples

125 g sugar $\div 1.4285 \rightarrow 87.5g$

500g
 $\div 350$
 $= 1.4285$
Ratio

Toby only has 350 g of sliced apples.

How much of each of the ingredients does Toby need to make the pie?

How many people will Toby's pie serve?

Solving Ratio Problems

Have students work on Investigate pg. 287

Recipe for Apple pie that serves 6 people.

500 ml flour

200 ml of margarine

500 g sliced apples

125 g sugar.

$$\begin{array}{r}
 \div 10 \quad 500 \text{ ml} \quad \times 7 \quad 350 \text{ ml} \\
 \quad \quad 200 \text{ ml} \quad \quad \quad 140 \text{ ml} \\
 \quad \quad 500 \text{ g} \quad \rightarrow \quad 350 \text{ g} \\
 \quad \quad 125 \text{ g} \quad \quad \quad 87.5 \text{ g}
 \end{array}$$

Toby only has 350 g of sliced apples.

How much of each of the ingredients does Toby need to make the pie?

How many people will Toby's pie serve?

$$\frac{7}{10} = \frac{35}{50} = \frac{350}{500}$$

ONLY MAKES 70% OF BATCH

$$70\% \text{ OF } 6 = 4.2$$

When given a question to find the missing variable in a ratio:

- First see if you can multiply or divide to get a term in the second ratio.
- Reduce the given ratio, if possible, then recheck to see if you can multiply or divide.
- Finally, make the same term in each ratio equal to solve for the missing term.

Examples

a) $3:8 = t:24$
 (3) is circled in red. A red arrow points from 3 to t with "x3" written below it. A green arrow points from 8 to 24 with "x3" written above it.
 $t = 9$

b) $15:40 = _p_ : 48$
 "Reduce" is written in green. A red arrow points from 15 to 3 and 40 to 8. A blue arrow points from 3 to 8 with "x6" written above it. A green arrow points from 40 to 48 with "x6" written below it.
 $p = 3 \times 6$
 $p = 18$

c) $4:9 = \frac{v}{10} : 10$
 Red arrows show 4 being multiplied by 10 and 9 by 10. Red arrows show v being divided by 9 and 10 by 9.

c) $40:90 = 9v:90$

hint can you make the second term the same??

$\frac{40}{9} = \frac{9v}{90}$
 $\frac{40}{9} = v$
 $4.\bar{4} = v$

Class/Homework

Worksheet 8 - Solving Ratios



labeled j

2

3

6

7

Attachments

Extra Practice 8 Solving Ratios.pdf