



Warm Up Grade 8
March 30, 2016



Test on Unit 5 April 6 (Wednesday)

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)

Pack	Carey
$200g : 9m^2$ $\div 9 \quad \div 9$ $22.2g : 1m^2$ $\times 3 \rightarrow 66.6g : 3m^2$	$150g : 6.5m^2$ $\div 6.5 \quad \div 6.5$ $23.1g : 1m^2$ <p>He put too much seed in the yard</p> $\times 4 \rightarrow 92.4g : 4m^2$ $600g : 26.0m^2$

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?

lighter (more white or less yellow)

A	$Y : W$ $5 : 3$ $\times 4 \quad \times 4$ $20 : 12$	<p>← least amount of yellow when both have 12 cans white</p>
B	$7 : 4$ $\times 3 \quad \times 3$ $21 : 12$	



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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

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

or 56% of
 shots

Nadhu played better.

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

 $\frac{2}{3}$ pizza / person

0.666...

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

 $\frac{3}{5}$ / person $\frac{6}{10}$ or 0.6

The Calgary team
 received more pizza per person

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

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Recipe A		OR	Recipe B
vinegar : oil	$\frac{5}{25}$	$\frac{3}{9}$ A $\frac{15}{45}$ B	vinegar : oil
150 : 250		$\frac{9}{45}$ A $\frac{16}{80}$ B	225 : 400
450 : 750			450 : 800

less 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	Mr. Albright
7 : 5	Fiction Non Fict.
<u>42</u> : 30	4 : 3
Fiction	<u>40</u> : 30
	Fiction

b) Ms Arbuckle

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

Mr. Albright

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

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) $1 : 6 = a : 54$

$$1 : 6 = 9 : 54$$

$$a = 9$$

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

$$2 : 15 = 10 : 75$$

$$f = 10$$

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

$$3 : 7 = 30 : 70$$

$$p = 70$$

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

$$3 : 8 = 15 : 40$$

$$e = 15$$

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

$$42 : 36 = 7 : 6$$

$$g = 7$$

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

$$26 : 65 = 2 : 5$$

$$r = 5$$

7. (a) $18 : a = 2 : 3$

$$18 : a = 2 : 3$$

$$a = 27$$

(b) $35 : b = 5 : 4$

$$35 : b = 5 : 4$$

$$b = 28$$

(c) $m : 18 = 6 : 9$

$$m : 18 = 6 : 9$$

$$m = 12$$

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

$$88 : 33 = 16 : 6$$

$$h = 16$$

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

$$3 : 4 = j : 44$$

$$j = 33$$

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

$$60 : 168 = 20 : w$$

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

$$w = 56$$

$$15 : 42 = 20 : w$$

$$5 : 14 = 20 : w$$

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

$$w = 56$$



Solving Ratio Problems



(HINT: REDUCE FIRST)

Recipe for Apple pie that serves 6 people.

500 ml flour	$\div 10$	50ml x7	350ml
200 ml of margarine		20ml x7	140ml
500 g sliced apples		50g x7	350g
125 g sugar		12.5g x7	

Toby only has 350 g of sliced apples.

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

$$\frac{350}{500} = \frac{35 \div 5}{50 \div 5} = \frac{7}{10}$$
Reduction

$= 70\%$
 of
 Recipe

How many people will Toby's pie serve?

70% of People
 70% of 6
 0.70×6
 4.2
 ≈ 4 people

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.

	$\div 10$	$\times 7$
	50ml	350ml
	20ml	140ml
	50g	350g
	12.5g	87.5g

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) $3 : 8 = \underline{9} : 24$

$\times 3$ $\times 3$

b) $15 : 40 = \underline{p} : 48$

Reduce
 $\div 5$ $\div 5$

$3 : 8 = p : 48$

$\times 6$ $\times 6$

$p = 18$

c) $4 : 9 = \frac{v}{9} : 10$

$\times 10$ $\times 10$ $\times 9$ $\times 9$

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

Solve

$9v = 40$

this is multiplication so to solve for "v"
 I need to divide both sides by # in front
 of letter

$\frac{9v}{9} = \frac{40}{9}$

$v = 4.\bar{4}$

hint can you make the second term the same??

Class/Homework

Worksheet 8 - Solving Ratios

2) $x \div 216 = 7 \text{ out of } 8$ $\times 27$
 $x = 189$

\swarrow 216 \div 8
to find
multiply

Attachments

Extra Practice 8 Solving Ratios.pdf