1) The recommended seeding on a package of grass seed is 200 g per 9 m^2. Carey spread 150 g over 6.5 m^2.
Is this more than, equal to, or less than the recommended seeding? How do you know? (Make a term 1)

Recommended

Seed : Area

$\div 9 \big($ 200g : 9m^2 $\big) \div 9$

22.$\overline{2}$g : 1 m^2

OR

600g : 27 m^2

Actual

Seed : Area

$\div 6.5 \big($ 150g : 6.5m^2 $\big) \div 6.5$

23g : 1m^2

↓
more seed

600g : 26 m^2
↓ less area
↓ more seed
in the same
area

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

Yellow : White

$\times 7 \big($ 5 : 3 $\big) \times 7$

35 : 21

↓
more white
lighter
(one she wants)

Shade 2

Yellow : White

$\times 5 \big($ 7 : 4 $\big) \times 5$

35 : 20

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10. Alison   Nadhu
    6 of 13 shots   5 of 9 shots
    ×9   ×9   ×13   ×13

    54 of 117   65 of 117

    $\frac{6}{13}$ = 0.46 $\frac{5}{9}$ = 0.555. –
         or   or 56 % of
      46% of   shots
       shots

Nadhu played better.

11. Calgary   Alberta
    2 pizza for 3 people   3 pizzas for 5 people
    ÷3   ÷3   ÷5   ÷5

    $\frac{2}{3}$ pizza /person $\frac{3}{5}$ /person

    0.666.. $\frac{6}{10}$ 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   5
                   25
vinegar : oil   A OR B   Recipe B
  3   v:o   v:o   vinegar : oil
 15   3:5   9:16
150 : 250   41:80 45:80   225 : 400
                                      9   16
450 : 750   450 : 800

         less : 1 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   Mr. Albright
✳ Fiction : Non Fiction   Fiction I Non Fict.
      7 : 5   4 : 3
      42 : 30   40 : 30
   ___   ___
   fiction   fiction

b) Ms Arbuckle
✳ $\frac{30}{72} = 0.42$ or 42%

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

14. A conc : water   B conc : water
         2 : 1   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
A	4 : 12
B	3 : 15
C	2 : 3

b)

red : yellow
1 : 3
1 : 5
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

pg. 291

4. (a) t : 18 = 6 : 3

$36 : 18$ ×6 ×6

$t = 36$

(b) v : 60 = 3 : 10

×6 ×6

$18 : 60 = 3 : 10$ ×6 ×6

$v = 18$

(c) x : 15 = 2 : 3

×5 ×5

$10 : 15 = 2 : 3$ ×5 ×5

$x = 10$

(d) s : 28 = 9 : 4

$63 : 28 = 9 : 4$ ×7 ×7

$s = 63$

(e) 6 : c = 2 : 11

$6 : 33 = 2 : 11$ ×3 ×3

$c = 33$

(f) 39 : b = 3 : 2

$39 : 26 = 3 : 2$ ×13 ×13

$b = 26$

5. (a) 5 : t = 15 : 36

$5 : 12 = 15 : 36$

$t = 12$

(b) 45 : 72 = 5 : n

$45 : 72 = 5 : 8$

$n = 8$

(c) 120 : 70 = 12 : k

$120 : 70 = 12 : 7$

$k = 7$

(d) 81 : 27 = 9 : m

$81 : 27 = 9 : 3$

$m = 3$

(e) 27 : 63 = p : 7

$27 : 63 < 3 : 7$

$p = 3$

(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 $\widetilde{\div 1.4}$ 4.2

Recipe for Apple pie that serves 6 people.   Have

     500 ml flour $\longrightarrow$ 350 mL

     200 ml of margarine $\longrightarrow$ $\approx$ 143mL

     500 g sliced apples $\overset{\widetilde{}}{\div} 1.4 \longrightarrow$ 350g

     125 g sugar. $\longrightarrow$ 89 g

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?   4 people

Step 1) $500 \div 350$

     ≈ 1.4 as

     the ratio factor

Step 2) divide each amount by 1.4

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.

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?

(handwritten annotations)

÷10   ×7

50ml   350ml
20ml   140ml
50g   350g
12.5g   87.5g
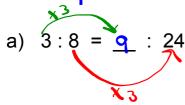
$$\frac{7}{10} = \frac{35}{50} = \frac{350}{500}$$
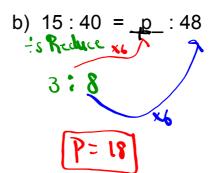
ONLY MAKES 70% OF BATCH

70% 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) $15 : 40 = \underline{p} : 48$

    $\div 5$ Reduce $\times 6$

    $3 : 8$ $\times 6$

$\boxed{P = 18}$

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

  $\downarrow \times 10 \downarrow \times 10$ make term 2 the same

    $\downarrow \times 9$ $\downarrow \times 9$

c) $40 : 90 = \underline{9v} : 90$

hint can you make the second term the same??

$$40 = 9v$$

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

$$\boxed{4.\overline{4} = v}$$

Class/Homework

e) $b:5 = 18:6$ $\curvearrowright \times 5$

$6b : 30 = 90:30$

$6b = 90$

Worksheet 8 - Solving Ratios

$45:30 = 6:5$

$\times 2 \quad 2\times 2 \quad \times 15 \quad \times 15$

$90:60 = 90:155$

OR

$9:6 = 6:5$

$18:12 \quad 18:35$

#1 acegi

#2

#3

#6

#7ab

#8

Attachments

Extra Practice 8 Solving Ratios.pdf