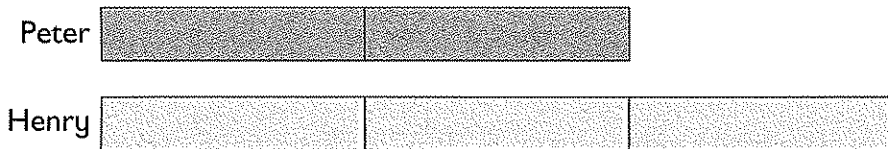


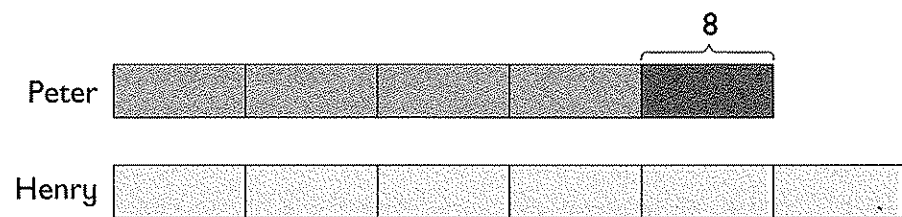
3 Changing Ratios

The ratio of the number of Peter's stamps to the number of Henry's stamps was 2 : 3. The ratio became 5 : 6 when Peter bought another 8 stamps.

Before:



After:



The number of my stamps does not change.



Henry

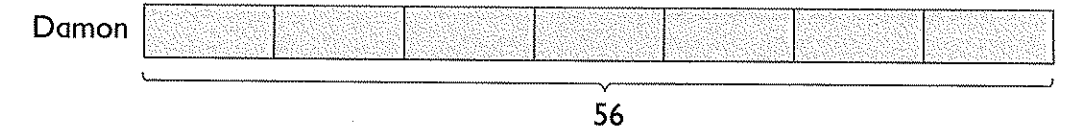
How many stamps did I have at first?
How many stamps do I have now?



Peter

- The ratio of the number of Joe's stamps to Damon's is 2 : 7. Damon has 56 stamps. If Damon gives 8 stamps to Joe, what will be the new ratio of the number of Joe's stamps to Damon's?

Before:



$$7 \text{ units} = 56$$

$$1 \text{ unit} = 56 \div 7 = 8$$

$$\text{Number of Joe's stamps} = 2 \text{ units} = 8 \times 2 = 16$$

After:

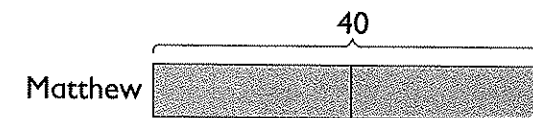
$$\text{Number of Joe's stamps} = 16 + 8 = 24$$

$$\text{Number of Damon's stamps} = 56 - 8 = 48$$

$$\text{New ratio} = 24 : 48 = \blacksquare : \blacksquare$$

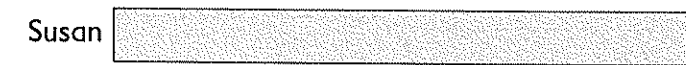
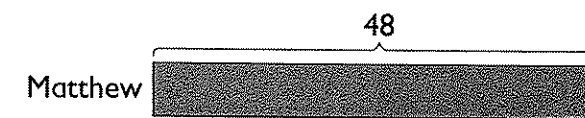
- The ratio of the number of Matthew's books to Susan's is 2 : 3. Matthew has 40 books. If Matthew buys another 8 books, what will be the new ratio of the number of Matthew's books to Susan's?

Before:

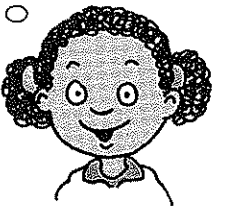


$$\text{Number of Susan's books} = \blacksquare$$

After:



The number of Susan's books remains unchanged.

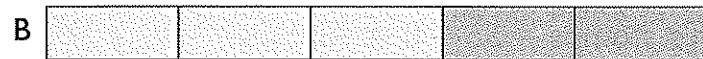


3. The ratio of the number of marbles in Box A to that in Box B is 4 : 3. If $\frac{1}{2}$ of the marbles in Box A are moved to Box B, what will be the new ratio of the number of marbles in Box A to that in Box B?

Before:

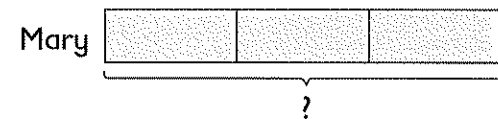


After:

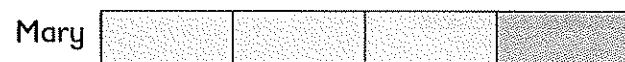
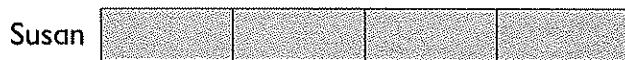


4. The ratio of Susan's money to Mary's money was 5 : 3 at first. After Susan gave \$20 to Mary, they had an equal amount of money each. How much money did Mary have at first?

Before:



After:

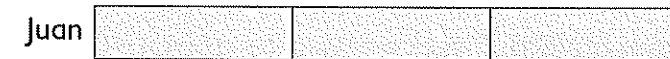


1 unit = \$20

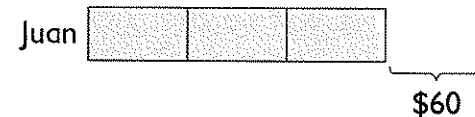
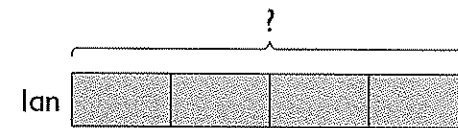
3 units = \$■

5. The ratio of Ian's money to Juan's money is 2 : 3. After spending $\frac{1}{2}$ of his money, Juan has \$60 less than Ian. How much money does Ian have?

Before:

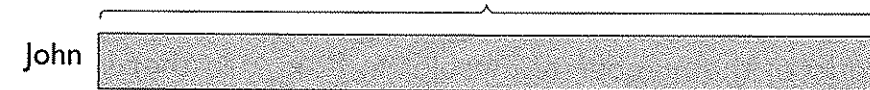


After:

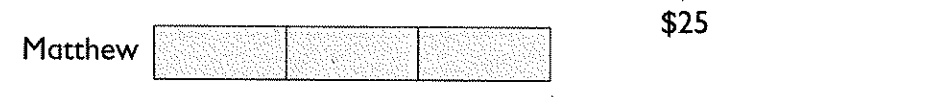


6. John and Matthew had an equal amount of money each. After John spent \$25 and Matthew spent \$18, the ratio of John's money to Matthew's money was 2 : 3. How much money did each boy have at first?

Before:



After:



\$18

PRACTICE 3C

- The ratio of boys to girls in a school choir is 4 : 3. There are 6 more boys than girls. If another 2 girls join the choir, what will be the new ratio of boys to girls?
- The ratio of Peter's money to Henry's money was 5 : 3 at first. After Peter spent \$12, they had an equal amount of money each. How much money did Peter have at first?
- Ali and Samy had an equal amount of money each. After Samy gave \$15 to Ali, the ratio of Ali's money to Samy's money was 7 : 5. How much money did each boy have at first?
- Sally and Susan had an equal amount of money each. After Sally spent \$15 and Susan spent \$24, the ratio of Sally's money to Susan's money was 4 : 3. How much money did each girl have at first?
- The number of Jim's stamps is $\frac{3}{4}$ of the number of David's stamps. If Jim gives $\frac{1}{2}$ of his stamps to David, what will be the ratio of the number of Jim's stamps to David's?
- The ratio of the number of Meili's books to Sulin's was 1 : 2 at first. After Meili bought another 12 books, the ratio became 2 : 1.
 - How many books did Sulin have?
 - If Sulin now buys another 5 books, what will be the new ratio of the number of Meili's books to Sulin's?
- The ratio of the number of marbles in Box A to that in Box B is 3 : 7. Box B has 12 more marbles than Box A.
 - How many marbles are there altogether?
 - If 3 marbles are moved from Box A to Box B, what will be the new ratio of the marbles in Box A to that in Box B?
- The ratio of John's money to Sumin's money was 5 : 2 at first. After John spent $\frac{1}{2}$ of his money, he had \$20 more than Sumin.
 - How much money did Sumin have?
 - How much money did John have at first?

REVIEW A

- Write the following in figures.
 - Forty thousand, five hundred eighty
 - Two million, seventy thousand
- Write the following in words.
 - 600,230
 - 8,005,000
- The population of a town is 109,028. Round off the number to the nearest hundred.
- A condo is sold for about \$210,000. Which one of the following could be the actual selling price of the condo?
\$195,000, \$204,000, \$214,000, \$218,000
- What is the missing number in each \blacksquare ?
 - $16,045 = 16,000 + \blacksquare$
 - $42.036 = 42 + \frac{36}{\blacksquare}$
- Find the value of each of the following:
 - $12 - 4 \div 2 + 6$
 - $24 + 6 \times 7 \div 3$
 - $(4 + 8) \times 3 \div 4$
 - $25 - (6 + 9 \times 2) + 5$
- Write down a common factor of 32, 64 and 76.
- Which one of the following is a multiple of 8?
4, 12, 18, 24
- Write $\frac{7}{8}$ as a decimal.
 - Express $4\frac{2}{3}$ as a decimal correct to 2 decimal places.
- Express 0.006 as a fraction in its simplest form.
 - Express 1.8 as a mixed number in its simplest form.
- What is the missing number in each \blacksquare ?
 - $3 : 6 = \blacksquare : 18$
 - $14 : 21 = 2 : \blacksquare$
 - $20 : 8 : 4 = \blacksquare : \blacksquare : 2$
 - $\frac{2}{3} = \blacksquare : 3$
- Mrs. King used 2 bags of flour to make 15 cup cakes. How many cup cakes can she make with 10 bags of flour?