Workbook exercise 2.1

Weighing flour

1 You have one set of the following weights: $\frac{1}{4}$ oz, $\frac{1}{2}$ oz, 1 oz, 2 oz, 4 oz, 8 oz, 16 oz.

Complete the following pictures to show some of the other whole-number amounts you could weigh from 1 oz to 31 oz. Two have been done for you.

continues
Will it be possible to make all whole-number amounts between 1 oz and 31 oz using just the 1 oz, 2 oz, 4 oz, 8 oz and 16 oz weights? Explain your answer.
Workbook exercise 2.2

Weighing flour again

1. Now you only have the following set of weights: 1 oz, 2 oz, 4 oz, 16 oz. Draw on the pictures to show which quantities you could weigh from 11 oz to 20 oz.
Chapter 2: Weigh it all up
Workbook exercise 2.3

Weighing other items

1. Work out as much as you can about the weight of the food in each scales picture below.

a) Sugar: = 1 oz

b) Salt:

c) Bananas:

d) Apples:

continues
**e)*** Lemons:

**f)*** Grapefruit:

**g)*** Cabbages:

**h)*** Cauliflowers and tomatoes:
Workbook exercise 2.4

Balancing the scales

1. a) Use Gary’s method to find the weight of a banana in part A.
   b) Use Ellie’s method to find the weight of a banana in part A.

   \[ \text{\(= 1 \text{ oz}\)} \]

A. Bananas

   a)

   b)

2. Use a method of your choice to find the weight of the other items in parts B to K.

B. Onions

continues
C. Mushrooms

D. Tomatoes

E. Cabbages

continues
F. Apples

G. Grapefruit

H. Tangerines

continues
I. Pears

J. Apples and bananas

K. Oranges and lemons
Workbook exercise 2.5

Drawing pictures for balance problems (1)

1 For each of the following balance problems find the value of the letter. Draw a scales picture first if that will help you.

a) \(6r + 15 = 11r + 5\)

b) \(2u + 17 + 3u = 11 + 7u\)

c) \(20 = 7v + 6\)

d) \(12t + 34 = 4t + 38\)

continues
e) \[ 17 + 3w + 4 = 6 + 2w + 3 + 5w \]

f) \[ 3f + 12 > f + 24 \]

g) \[ 13g + 60 < 6g + 109 \]

h) \[ 62 + 29h = 20 + 33h + 18 \]
Workbook exercise 2.6

Drawing pictures for balance problems (2)

1 For each of the following balance problems find the value of the letter. Draw a scales picture first if that will help you.

a) \[4(j + 7) = 2j + 35\]

b) \[7 + 4k = 2(k + 16)\]

c) \[5(u + 5) = 8(u + 2)\]

d) \[3(m + 8) = 6(m + 3)\]
e) \[9n + 8 = 5n + 8\]

f) \[2(p + 12) = 5p + 9\]

g) \[3(q + 4) + 2 = 2(q + 7)\]

h) \[6 + 2(r + 2) = 3(r + 1) + 2\]