Multiple-choice section

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Question | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Answer | D | A | C | C | D | B | B | D | A | C |

Question 1 [4.1]

D

Keeping the same order (13 year olds to 14 year olds), ratio is 4 : 5.

Question 2 [4.1]

A



Question 3 [4.2]

C

As the units are the same, 4 : 8 is equivalent to 1 : 2.

Question 4 [4.3]

C

11 : 55

Dividing both sides of ratio by 11 gives

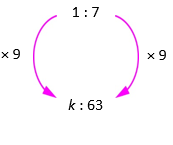
1 : 5

Question 5 [4.4]

D

1 : 7 is equivalent to *k* : 63

*k* = 63 ÷ 7 = 9



Question 6 [4.5]

B

1 m = 1000 mm

The ratio 2 mm : 1000 mm is 2 : 1000

Dividing both sides of ratio by 2 gives

1 : 500

Question 7 [4.5]

B

6 m ÷ 20 = 0.3 m

0.3 m × 100 = 30 cm

Question 8 [4.6]

D

2 + 3 = 5 parts in the ratio

1 part = 25 ÷ 5 = 5

2 × 5 : 3 × 5

10 : 15

Simon gets $10 and Ava gets $15

Question 9 [4.7]

A

Distance walked:  450 m

450 m ÷ 30 minutes = 15 metres per minute

Question 10 [4.7]

C

500 g × 2 = 1000 g = 1 kg

$6 × 2 = $12

Multiple-choice total marks: 10

Short answer section

Question 11 3 marks [4.1, 4.2]

(a) (red snakes) : (yellow snakes) is 5 : 7

(b) green = 3, total = 15  
%

(c) One possible answer: 5 : 7 is equivalent to 10 : 14

Question 12 6 marks [4.2]

(a)  : 6  
****  
3 : 12  
1 : 4

(b) Total mass of fruit: + 6 +  = 9 kg

 : 9



3 : 18

1 : 6

(c) Mass of pineapple + pear =  + 6 =  kg  
 : 9

   
15 : 18

5 : 6

Question 13 2 marks [4.4]

(a) 5 : 4  
 or 1.25 : 1

(b) Mass of flour = 1.25 × 60 = 75 g

Question 14 3 marks [4.3]

(a) 600 ÷ 60 = 10 times

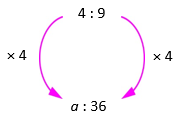
(b) 600 ÷ 20 = 30 times

(c) 600 ÷ 40 = 15 times

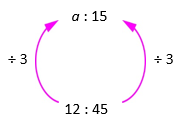
Question 15 4 marks [4.4]

(a)

*a* = 4 × 4 = 16



(b)   
  
*a* = 12 ÷ 3 = 4



Question 16 4 marks [4.5]

(a) 2 m = 200 cm  
Ratio of 5 cm : 200 cm   
is 1 : 40

(b) The scale factor is 40.

(c) 1 : 40 is equivalent to 100 mm : actual size, so  
actual size = 40 × 100 mm   
= 4000 mm or 4 m

Question 17 2 marks [4.6]

5 + 3 = 8 parts in the ratio

Number of hard-centred chocolates = = 50

Number of soft-centred chocolates = = 30

Question 18 2 marks [4.7]

(a) 11:20 am to 11:44 am is 24 minutes.  
 = 0.4 of an hour

(b) km/h

Question 19 4 marks [4.7]

(a) 200 mL × 24 h  
= 4800 mL or 4.8 L

(b) 4.8 L per day × 365 = 1752 L or 1.752 kL

(c) $15 + $1 × 0.752 = $15.75

Short answer results: 30

Extended answer section

Question 20 4 marks [4.7]

(a) Matt tiles: 24 for $120  
$120 ÷ 24 = $5 each  
Gloss tiles: 18 for $126   
$126 ÷ 18 = $7 each  
Standard tiles: 18 for $108   
$120 ÷ 20 = $6 each

(b) Matt tiles are the best buy as they have the cheapest individual price.

Question 21 6 marks [4.7]

(a) (i) A$200 = US$200 × 0.7   
= US$140

(ii) A$200 = 200 × 4 yuan   
= 800 yuan

(iii) A$200 = 200 × 80 yen   
= 16000 yen

(b) (i) US$35.00 ÷ 0.7 = A$50

(ii) 50.00 yuan ÷ 4 = A$12.50

(iii) 2800 yen ÷ 80 = A$35

Extended answer results: 10

TOTAL test results: 50