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 5 : 3.

Question 2 [4.1]

A



Question 3 [4.2]

C

As the units are the same, 3 : 6 is equivalent to 1 : 2.

Question 4 [4.3]

C

12 : 48

Dividing both sides of ratio by 12 gives

1 : 4

Question 5 [4.4]

D

1 : 5 is equivalent to *k* : 45

*k* = 45 ÷ 5 = 9

Question 6 [4.5]

B

3 cm = 30 mm

The ratio 5 mm : 30 mm is 5 : 30

Dividing both sides of the ratio by 5 gives

1 : 6

Question 7 [4.5]

B

4 m ÷ 50 = 0.08 m

0.08 m × 100 = 8 cm

Question 8 [4.6]

D

4 + 5 = 9 parts in the ratio

1 part = 18 ÷ 9 = 2

4 : 5

Multiplying both sides of ratio by 2 gives

8 : 10

Simon gets $8 and Ava gets $10

Question 9 [4.7]

A

Distance walked:  240 m

240 m ÷ 20 minutes = 12 metres per minute

Question 10 [4.7]

C

200 g × 5 = 1000 g = 1 kg

$2.20 × 5 = $11

Multiple-choice total marks: 10

Short answer section

Question 11 3 marks [4.1, 4.2]

(a) (red snakes) : (yellow snakes) is 3 : 2

(b) green = 5, total = 10  
%

(c) One possible answer: 3 : 2 is equivalent to 6 : 4

Question 12 6 marks [4.2]

(a)  : 5



5 : 10

1 : 2

(b) Total mass of fruit:   + 5 +  = 10 kg

 : 10



5 : 20

1 : 4

(c) Mass of pineapple + pear =  + 5 =  kg

 : 10



15 : 20

3 : 4

Question 13 2 marks [4.3]

(a) 3 : 2  
Dividing both sides of ratio by 2 gives  


(b) Mass of flour = 1.5 × 50 = 75 g

Question 14 3 marks [4.3]

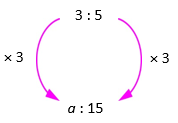
(a) 500 ÷ 50 = 10 times

(b) 500 ÷ 10 = 50 times

(c) 500 ÷ 20 = 25 times

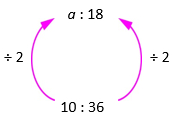
Question 15 4 marks [4.4]

(a)



*a* = 3 × 3 = 9

(b)



*a* = 10 ÷ 2 = 5

Question 16 4 marks [4.5]

(a) 1 m = 100 cm  
Ratio of 1 cm : 100 cm   
is 1 : 100

(b) The scale factor is 100.

(c) 1 : 100 is equivalent to 60 mm : actual size, so  
actual size = 100 × 60 mm   
= 6000 mm or 6 m

Question 17 2 marks [4.6]

3 + 2 = 5 parts in the ratio

Number of hard-centred chocolates = = 30

Number of soft-centred chocolates = = 20

Question 18 2 marks [4.7]

(a) 10:15 am to 10:45 am is 30 minutes.  
 = 0.5 of an hour

(b) km/h

Question 19 4 marks [4.7]

(a) 300 mL × 24 h  
= 7200 mL or 7.2 L

(b) 7.2 L per day × 365 = 2628 L or 2.628 kL

(c) $20 + $1 × 1.628 = $21.63

Short answer results: \_\_\_ / 30

Extended answer section

Question 20 4 marks [4.7]

(a) Matt tiles: 25 for $200   
$200 ÷ 25 = $8 each  
Gloss tiles: 15 for $1325  
 $135 ÷ 15 = $9 each  
Standard tiles: 20 for $140  
$1450 ÷ 20 = $7 each

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

Question 21 6 marks [4.7]

(a) (i) A$100 = US$100 × 0.8   
= US$80

(ii) A$100 = 100 × 5 yuan   
= 500 yuan

(iii) A$100 = 100 × 75 yen   
= 7500 yen

(b) (i) US$50.00 ÷ 0.8 = A$62.50

(ii) 30.00 yuan ÷ 5 = A$6.00

(iii) 2100 yen ÷ 75 = A$28.00

Extended answer results: \_\_\_ / 10

TOTAL test results: \_\_\_ / 50