Multiple-choice section

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Question | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Answer | C | A | D | C | B | D | C | B | B | C | B | A |

Question 1 [2.1]

C



Question 2 [2.1]

A



Question 3 [2.2]

D

 = 1 ÷ 9

= 0.111 111…

= 

Question 4 [2.3]

C



Question 5 [2.4]

B

The water line is up 7 marks from the bottom of the jug which is 10 even marks tall. This means that the jug can be considered to be 70% full.

Question 6 [2.5]

D



Question 7 [2.5]

C

8.25 × 100% = 825%

Question 8 [2.6]

B

75% = 75 ÷ 100

= 0.75

Question 9 [2.6]

B



Question 10 [2.7]

C

45 seconds out of 2 minutes is 45 seconds out of 120 seconds.



Question 11 [2.8]

B



Question 12 [2.9]

A

$1800 ×1.4 = $2520

Multiple-choice total marks: 12

Short answer section

Question 13 4 marks [2.1]

|  |  |
| --- | --- |
| (a) , so 25 ÷ 4 = 6.25 | (b) , so |

Question 14 6 marks [2.2]

(a) = 9 ÷ 13   
 = 0.692 307 692...   
 = ; this is a recurring decimal.

(b)  = 31 ÷ 2   
 = 15.5; this is a terminating decimal.

(c)  = 2.645 751 311…; this is an irrational number.

Question 15 2 marks [2.2]

Let *x* = 0.444 44… [1]

10*x* = 4.444 44… [2]

[2] – [1] gives

10*x* – *x* = 4.444 44… – 0.444 44…

9*x* = 4

*x* = 

Question 16 6 marks [2.3]

(a) , , , , 

(b) -9.9, -3.5, -2.6, -0.2, 0.9

Question 17 6 marks [2.3]

(a)   


(b)



(c) -2.652 – 4.1 = -6.752

Question 18 4 marks [2.5]

|  |  |
| --- | --- |
| (a) 9.08 × 100% = 908% | (b) 0.001 × 100% = 0.1% |

Question 19 4 marks [2.6]

|  |  |
| --- | --- |
| (a) 42% = 42 ÷ 100   = 0.42 | (b) 84.2% = 84.2 ÷ 100   = 0.842 |

Question 20 4 marks [2.6]

|  |  |
| --- | --- |
| (a) 415% = | (b) 2.8% = |

Question 21 2 marks [2.7]

(100 ÷ 150) × 100% = 

Question 22 4 marks [2.6]

|  |  |
| --- | --- |
| (a) 28% =   = | (b) 85% =   = 0.85 |

Question 23 4 marks [2.7]

(a) Profit is $1085 – $820 = $265

(b) Percentage profit is 

Question 24 4 marks [2.8]

(a) 55% of 24 000 = 0.55 × 24 000   
 = 13 200

(b) 24 000 – 13 200 = 10 800

Question 25 2 marks [2.9]

1.12 × $4 200 000 = $4 704 000

Question 26 4 marks [2.9]

(a) 30% of $300 000 = 0.3 × $300 000   
 = $90 000

(b) $300 000 – $90 000 = $210 000

Question 27 4 marks [2.10]

(a) $40 × 1.4 = $56 (b) $85 × 1.4 = $119

Short answer total marks: 60

Extended answer section

Question 28 6 marks [2.1]

(a) 2.4 × $8.99 = $21.576, which is rounded to $21.58.

(b) The amount paying by cash is $21.60.

(c) $100 ÷ 15 metres is approximately $6.67 per metre.

(d) Buying the material by the roll is cheaper at $6.67 per metre compared to the original cost of $8.99 per metre. Unless Lucinda can use most of the material in her project there might be a lot of wastage. If this so, it is cheaper to buy the exact amount.

Question 29 7 marks [2.2]

(a) First section:   
Second section:   
Third section: 

(b) 

(c) (i) 

(ii) 

Question 30 4 marks [2.5]

(a) Spelling: 0.725 × 100 = 72.5%

(b) Writing: 0.925 × 100 = 92.5%

(c) 92.5% – 72.5% = 20%

Question 31 2 marks [2.8]

(a) 100% – 85% = 15% do not have brown hair

(b) 85% of students have brown hair = 0.85 × 20   
 = 17 students

Question 32 6 marks [2.10]

(a) Cost of pass after 10% discount = 0.9  $135   
 = $121.50

(b) Increase in cost of pass = $135  $120  
 = $15  
Percentage increase =   
 = 12.5%

(c) Cost expected next year = 1.07  $135  
 = $144.45

Extended answer total marks: 25

TOTAL test marks: 97