Multiple-choice section

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

Question 1 [2.1]

D

 = 2 + 1 ÷ 9

= 2 + 0.1111…

=

Question 2 [2.1]

B



Question 3 [2.2]

C

 = 43 ÷ 11

= 3.909 090… = 

Question 4 [2.3]

A



Question 5 [2.4]

C

The water line is up 4 marks from the bottom of the jug which is 8 even marks tall. This means that the jug can be considered to be half empty or 50% empty.

Question 6 [2.5]

D



Question 7 [2.5]

D



Question 8 [2.6]

B



Question 9 [2.6]

A



Question 10 [2.7]

D

25 seconds out of 2 minutes is 25 seconds out of 120 seconds.



Question 11 [2.8]

A



Question 12 [2.9]

B

$1500 ×1.282 = $1923

Multiple-choice total marks: 12

Short answer section

Question 13 4 marks [2.1]

(a) , so 187 ÷ 30 = 

(b)



Question 14 6 marks [2.2]

|  |  |
| --- | --- |
| (a) Let *x* =   = 3.21111111…  100*x* =   10*x* =   100*x* – 10*x* =  –   90*x* =289 | (b) Let *x* =   = 2.717171… 100*x* = 271.717171…  99*x* = 269 |

Question 15 6 marks [2.2]

(a) ; this is a recurring decimal.

(b)  = 13 ÷ 8 = 1.625; this is a terminating decimal.

(c) ; this is an irrational number.

Question 16 6 marks [2.3]

(a) , , ,, 

(b) -2.2, -2.19, -2.05, -2, 2.09, 2.5

Question 17 6 marks [2.3]

|  |  |  |
| --- | --- | --- |
| (a) | (b) | (c) -2.142 – 5.002 = -7.144 |

Question 18 4 marks [2.5]

|  |  |
| --- | --- |
| (a) 9.006 × 100 = 900.6% | (b) 0.007 × 100 = 0.7% |

Question 19 4 marks [2.6]

|  |  |
| --- | --- |
| (a) 23.002% = 23.002 ÷ 100   = 0.230 02 | (b) 0.0004% = 0.0004 ÷ 100   = 0.000 004 |

Question 20 4 marks [2.6]

|  |  |
| --- | --- |
| (a) | (b) |

Question 21 4 marks [2.7]

(a) Profit = $63000$45000  
 = $18000

(b) Percentage profit =   
 =   
 = 40%

Question 22 4 marks [2.8]

|  |  |
| --- | --- |
| (a) 32.5% of 36 000 = 0.325 × 36 000  = 11 700 | (b) 36 000 – 11 700 = 24 300 |

Question 23 2 marks [2.9]

Increased by 12.5% = 100% + 12.5%  
 = 112.5%  
 = 1.125

Expected revenue of store = 1.125  $125 000

= $140 625

Question 24 4 marks [2.9]

|  |  |
| --- | --- |
| (a) 12.25% of $600 000 = 0.1225 × $600 000  = $73 500 | (b) $600 000 – $73 500 = $526 500 |

Question 25 4 marks [2.10]

|  |  |
| --- | --- |
| (a) Amount of discount = 35%  $280  = 0.35  $280  = $98 | (b) Selling price of jacket = $280$98  = $182 |

Short answer total marks: 58

Extended answer section

Question 26 6 marks [2.1]

(a) Cost of paint = 22 $11.50  
 = $253

(b) Cost of paint per litre =   
 = $11

(c) The second offer is cheaper at $11 per litre compared with $11.5 per litre. However, if Dave does not need 25 litres of paint there might be a lot of wastage, and it is cheaper to spend $253 for 22 litres compared to $275.

Question 27 7 marks [2.2]

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

(b) 

(c) (i) 

(ii) 

Question 28 4 marks [2.5]

(a) Spelling: 0.955 × 100 = 95.5%

(b) Writing: 0.825 × 100 = 92.5%

(c) Average of the Spelling and the Writing scores = 94%, average of the Punctuation and  
Reading scores = 75%, so the difference between them is 94% – 75% = 19%.

Question 29 4 marks [2.8]

(a) Two fifths is 40%.

(b) 60% of students walk to school = 0.6 × 60   
 = 36 students

(c) 

(d) Number of students who walk to school: 10 + 36 = 46  
Total number of students: 60 + 44 = 104  
Percentage of students who walk to school: 

(e) Number of students joining the school: 520 – 480 = 40  
Percentage increase = 

Question 30 7 marks [2.10]

(a) Price of holiday cruise after 5% discount = 0.95 × $2470  
 = $2346.50

(b) Increase in price of cruise = $2470  $2100  
 = $370  
Percentage increase =    
 = 17.62%

(c) Price expected next year = 1.10  $2470  
 = $2717

(d)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| People under 20 | = 15% of 60  = 15%  60 = 0.15  60  = 9 | Adults | = 65% of 60  = 65%  60 = 0.65  60 = 39 | Pensioners | = 60  (9 + 39) = 12 |

Total cost for the group =   
 = $11 115 + $96 330 + $7410  
 = $114 855

Extended answer total marks: 28

TOTAL test marks: 98