Multiple-choice section

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

Question 1 [1.1]

**C**

16 × 6

= (10 + 6) × 8

= 10 × 8 + 6 × 8

Question 2 [1.2]

**D**

65 = 6 × 6 × 6 × 6 × 6

Question 3 [1.2]

**B**



Question 4 [1.3]

**B**

150 ÷ 20

= 150 ÷ 10 ÷ 2

= 15 ÷ 2

= 7.50

$7.50 per student

Question 5 [1.3]

**A**

|  |  |  |  |
| --- | --- | --- | --- |
| Option A | Option B | Option C | Option D |
| 640 ÷ 8 | 640 ÷ 8 | 640 ÷ 8 | 640 ÷ 8 |
| = 6 ÷ 8 + 4 ÷ 8 + 0 ÷ 2 | = 640 ÷ 2 ÷ 2 ÷ 2 | = 600 ÷ 8 + 40 ÷ 8 | = 64 ÷ 8 × 10 |
| = 0.75 + 0.5 + 0 | = 320 ÷ 2 ÷ 2 | = 75 + 5 | = 8 × 10 |
| = 1.25 | = 160 ÷ 2 | = 80 | = 80 |
|  | = 80 |  |  |

Question 6 [1.4]

**C**

Cricket pads $48; hat $23; cricket bat $62

Estimated total = 50 + 20 + 60 = $130

Question 7 [1.4]

**C**

112 × 28

≈ 100 × 30

= 3000

Question 8 [1.5]

**D**

4 + 36 \* 9 = 8

Option A: 4 + 36 + 9 = 49

Option B: 4 + 36 – 9 = 31

Option C: 4 + 36 × 9 = 328

Option D: 4 + 36 ÷ 9 = 8

Question 9 [1.5]

**B**

16 + 42 ÷ (2 + 6)

= 16 + 16 ÷ 8

= 16 + 2

= 18

Question 10 [1.6]

**B**

Angela: $52

Older brother: Double the amount $52 × 2 = $104

Younger brother: Half the amount $52 ÷ 2 = $26

Difference = 104 – 26 = $78

Multiple-choice total marks: 10

Short answer section

Question 11 2 marks [1. 2, 1.3]

(a) The *remainder* is what is left over after a division calculation has been completed.

(b) The square root of a *perfect square* is a whole number.

Question 12 2 marks [1.2]

For example: 43 is written in index form. 43 = 4 × 4 × 4  
The base 4 is the number that is multiplied repeatedly.

The power 3 is also called the index. It describes how many times the base appears as a factor when the number is expressed in expanded form. In this case, the base appears 3 times.

Question 13 2 marks [1.1]

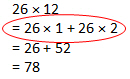
2 × 36 × 5

= 2 × 5 × 36

= 10 × 36

= 360

Question 14 3 marks [1.3]

(a) Jonathon’s working  


(b) Correct working  
26 × 12  
= 26 × 10 + 26 × 2  
= 260 + 52  
= 312

(c) Jonathon split up the ‘units’ place value correctly but has forgotten that the first digit in the number he is splitting is in the ‘tens’ place-value column.

Question 15 2 marks [1.1]

26 + 67 + 54

= 26 + 54 + 66

= 80 + 67

= 147

Question 16 2 marks [1.1]

426 × 4

= 426 × 2 × 2

= 852 × 2

Question 17 4 marks [1.2]

|  |  |
| --- | --- |
| (a) 25 = 2 × 2 × 2 × 2× 2 = 32 | (b) 106 = 10 × 10 × 10 × 10 × 10 × 10 = 1 000 000 |

Question 18 2 marks [1.2]

|  |  |
| --- | --- |
| (a) 4 × 4 × 4 = 43 | (b) 60 × 60 × 60 × 60 × 60 = 605 |

Question 19 2 marks [1.2]

32 –

= 9 – 2

= 7

Question 20 2 marks [1.3]

264 ÷ 4

= 264 ÷ 2 ÷ 2

= 132 ÷ 2

= 66

Question 21 3 marks [1.3]

|  |  |  |  |
| --- | --- | --- | --- |
|  | 50 | 3 |  |
| 40 | 2000 | 120 | 2120 |
| 7 | 350 | 21 | + 371 |
|  |  |  | 2491 |

Question 22 2 marks [1.3]

36 000 ÷ 400

= 360 ÷ 4

= 90

Question 23 1 mark [1.4]

8000

Question 24 4 marks [1.4]

|  |  |
| --- | --- |
| (a) 38 × 72 = 40 × 70 = 4 × 7 × 10 × 10 = 2800 | (b) 6245 ÷ 33  = 6000 ÷ 30 = 600 ÷ 3 = 200 |

Question 25 4 marks [1.5]

|  |  |
| --- | --- |
| (a) 18 × (9 – 7) ÷ 4 = 18 × 2 ÷ 4 = 36 ÷ 4 = 9 | (b) 30 + 44 ÷ 4 – 7  = 30 + 11 – 7 = 41 – 7 = 34 |

Question 26 2 marks [1.5]

|  |  |
| --- | --- |
| (a) (8 + 10) ÷ (2 + 4) = 3 | (b) 43 + 12 ÷ (8 – 2) = 45 |

Short answer total: 40

Extended answer section

Question 27 4 marks [1.3, 1.4, 1.6]

(a) 30 000

(b) 30 000 × 44  
= 30 000 × 40 + 30 000 × 4  
= 1 200 000 + 120 000  
= $1 320 000

Question 28 6 marks [1.1, 1.4, 1.5]

(a) First call: 25 + 80 = 105  
Second call:  
25 + 4 × 80  
= 25 + 320  
= 345  
Third call:  
0 + 70 × 10  
 = 700  
Total cost  
= 105 + 345 + 700  
= 1150 cents  
= $11.50

(b) Credit – Total cost of calls  
= Remaining credit  
1500 – (25 + 80 + 25 + 4 × 80 + 70 × 10)  
= 1500 – 1150  
= 350 cents

Extended answer total: 10

TOTAL test marks: 59