Multiple-choice section

Question 1 [1.1]

Which one of the following has the same value as 16 × 6?

A 10 × 6 + 8 B 10 × 8 + 8 C 10 × 8 + 6 × 8 D 10 × 8 × 6

Question 2 [1.2]

Another way of writing 65 is:

A 5 × 5 × 5 × 5 × 5 × 5 B 6 × 6 × 6 × 6 × 6 × 5 × 5 × 5 × 5 × 5 × 5

C 6 × 5 D 6 × 6 × 6 × 6 × 6

Question 3 [1.2]

The cube root of 8 is:

A 1 B 2 C 3 D 4

Question 4 [1.3]

The total cost for a footy team of 20 Year 7 students to go to Hungry Jacks for lunch is $150. How much should the teacher charge each student?

A $7 B $7.50 C $8 D $8.50

Question 5 [1.3]

Which of the following is an incorrect method for calculating 640 ÷ 8?

A Calculate 6 ÷ 8, 4 ÷ 8 and 0 ÷ 8, then add the results together.

B Halve 640, then halve the answer, then halve the answer again.

C Calculate 600 ÷ 8 and 40 ÷ 8, then add the quotients.

D Calculate 64 ÷ 8, then multiply by 10.

Question 6 [1.4]

Estimate the total cost of these items: cricket pads $48; hat $23; cricket bat $62

A $110 B $120 C $130 D $140

Question 7 [1.4]

The answer to 112 × 28 would be closest to:

A 1000 B 2000 C 3000 D 4000

Question 8 [1.5]

Which symbol would replace \* to make the following statement true?

4 + 36 \* 9 = 8

A + B – C × D ÷

Question 9 [1.5]

The correct answer to 16 + 42 ÷ (2 + 6) is:

A 16 B 18 C 20 D 22

Question 10 [1.6]

Angela received $52 for her birthday, her older brother received double that amount and her younger brother received half of Angela’s amount. What is the difference between the amounts of money her two brothers received?

A $46 B $78 C $85 D $90

Multiple-choice total marks: \_\_\_\_ / 10

Short answer section

Question 11 2 marks [1.2, 1.3]

Use words from the list below to complete the following sentences.

*product quotient index form base perfect square remainder divisor*

(a) The \_\_\_\_\_\_\_\_\_\_\_\_\_\_ is what is left over after a division calculation.

(b) The square root of a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a whole number.

Question 12 2 marks [1.2]

Explain the difference between a base and an index. Use an example to help you explain.

Question 13 2 marks [1.1]

Calculate the following: 2 × 36 × 5.

Question 14 3 marks [1.3]

Below is Jonathon’s working for a calculation from his maths homework. He was asked to find the answer to 26 × 12 but he made a mistake.

(a) Circle the line of working where the error appears.

(b) Write the correct working for the question in the space next to Jonathon’s working.

Jonathon’s working Correct working

26 × 12

= 26 × 1 + 26 × 2

= 26 + 52

= 78

(c) Briefly explain where Jonathon went wrong in the calculation.

Question 15 2 marks [1.1]

Use an appropriate mental strategy to find the value of 26 + 67 + 54.

Question 16 2 marks [1.1]

Use an appropriate strategy to find the value of 426 × 4.

Question 17 4 marks [1.2]

Write each of the following in expanded form, then evaluate.

(a) 25 (b) 106

Question 18 2 marks [1.2]

Write each of the following in index form.

(a) 4 × 4 × 4 (b) 60 × 60 × 60 × 60 × 60

Question 19 2 marks [1.2]

Evaluate 32 – .

Question 20 2 marks [1.3]

Calculate 264 ÷ 4 using the ‘work in stages’ strategy.

Question 21 3 marks [1.3]

Calculate 53 × 47 using an ‘array’ strategy.

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Question 22 2 marks [1.3]

Calculate: 36 000 ÷ 400

Question 23 1 mark [1.4]

Round 8450 to the first digit.

Question 24 4 marks [1.4]

Estimate the following by rounding to the first digit.

(a) 38 × 72 (b) 6245 ÷ 33

Question 25 4 marks [1.5]

Evaluate the following.

(a) 18 × (9 – 7) ÷ 4 (b) 30 + 44 ÷ 4 – 7

Question 26 2 marks [1.5]

Insert brackets to make the following statements true.

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

Short answer total:\_\_\_\_\_\_\_\_\_/39

Extended answer section

Question 27 4 marks [1.3, 1.4, 1.6]

33 452 people are booked to see a Lady GooGoo concert. The average cost of a ticket is $44.

(a) Round the number of attendances to the first digit.

(b) Use your rounded answer from part (a) to estimate the total revenue received from the game. (Revenue = money received)

Question 28 6 marks [1.1, 1.4, 1.5]

Below are the rates for a new mobile phone company:

Peak time: 25 cents connection fee and 80 cents per minute.

Off-peak time: no connection fee and 75 cents per minute.

Benjamin makes three calls.

* The first call lasted 1 minute and was made during peak time.
* The second call lasted 4 minutes and was also made during peak time.
* The third call lasted 10 minutes but was made during the cheaper off-peak time.

(a) Calculate the total cost of the calls in dollars.

(b) Benjamin has $15 credit on his phone. Using the symbols +, – , ÷ , × and at least one pair of brackets, write down a calculation that Benjamin could use to determine how much credit remained on his phone after the three calls.

Extended answer total:\_\_\_\_\_\_\_\_\_/10

TOTAL test marks: \_\_\_\_ / 59