YEAR 7 END TERM 1 REVISION 2

91 marks from 91 questions

Question 1

Find the value of $10 + -2$. ☐

Question 2

Evaluate $-5 - -2$. $-5 - -2 =$ ☐

Question 3

Evaluate $20 + -7$. $20 + -7 =$ ☐

Question 4

Which calculation is shown on this number line?

a. $100 + 800 = 810$ b. $800 + -100 = 700$ c. $800 - -100 = 700$ d. $-800 + -100 = -710$

Question 5

$10 - 6 = 4$ means 'the number that is 6 less than 10 is 4'.

Write the answer to this subtraction.

$-10 - 6 =$ ☐

Question 6

$5 + 8 = 13$ means 'the number that is 8 more than 5 is 13'.

Write the answer to this addition.

$-5 + 8 =$ ☐

Question 7

$20 - 7 = 13$ means 'the number that is 7 less than 20 is 13'.

Complete this subtraction

$7 - \square = -9$

Question 8

$12 - 3 = 9$ means 'the number that is 3 less than 12 is 9'.

Write the answer to this subtraction.

$3 - 12 = \square$

Question 9

Enter the missing number:

$\square \times 8 = -72$

Question 10

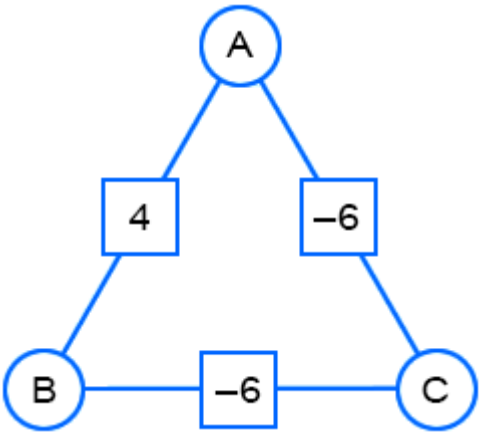
Enter the missing number:

$\square \times 8 \times 8 = -128$

Question 11

The numbers in the circles multiply in pairs to give the numbers in the squares between them.

What is the product of all three circled numbers if C = 3?



Question 12

$-2 \times 5 \times 4 =$ ☐

Question 13

$(+2) \times (+4) \times (-5) =$ ☐

Question 14

$(+3) \times (-10) \times (+4) =$ ☐

Question 15

What is the next number in this pattern?

$-2, 4, -8, 16, \ldots$

☐

Question 16

$-6 \times 3 \div 2 =$ ☐

Question 17

153, 170 and 187 are all divisible by the same number.

What is the number?

☐

Question 18

Number	Multiples
A	5, 10, 15, 20, ...

The table shows the first four multiples of A. Therefore A = ☐

Question 19

What is the lowest common multiple of 4, 6 and 10?

Question 20

The lowest common multiple of ? and 5 is 15.

? could equal:

a. 3

b. 8

c. 10

d. 60

Question 21

What is the first multiple of 5 that is greater than 1000?

Question 22

List all the multiples of 5 between 18 and 48. Write them in ascending order.

20, , , , ,

Question 23

50 is a multiple of: a. ☐10 Be sure to select all correct answers.

b. ☐100

c. ☐20

d. ☐50

Question 24

Number	Multiples
14	14, 28, 42, 56, 70 , 84, 98, 112, 126, 140 , ...
35	35, 70 , 105, 140 , ...

The first two common multiples of 14 and 35 are 70 and 140.

What will be the next common multiple after 140?

Question 25

What is the smallest 3-digit number that is divisible by 9?

Question 26

Which number is a factor of all numbers?

Question 27

The smallest multiple of every number is:

a. odd

b. even

c. the number itself

d. a negative integer

Question 28

Tara said that 49 has two factors because $49 = 7 \times 7$.

Is she correct?

a. Yes, because 7 divides into 49 with no remainder.
b. No, there are three factors: 1, 7, 49.
c. No, there's only one factor, 7.
d. No, because there are four factors: 1, 7, 7, 49.

Question 29

List all the *square number* factors of 36. Write them in ascending order.

[ ], [ ], [ ], [ ]

Question 30

What is the largest factor of 18 that is also a factor of 72? [ ]

Question 31

Number	Factors
18	1, 2, 3, 6, 9, 18
24	1, 2, 3, 4, 6, 8, 12, 24
40	1, 2, 4, 5, 8, 10, 20, 40

Find the highest common factor of 18, 24 and 40. [ ]

Question 32

True or false?

15 is a factor of 5.

a. True

b. False

Question 33

Which of these numbers are factors of 45?

Select all correct answers.

a. ☐ 2

b. ☐ 3

c. ☐ 4

d. ☐ 5

e. ☐ 6

f. ☐ 9

Question 34

What does it mean if a number is even and divisible by 3?

a.It is divisible by 4.

b.It is divisible by 5.

c.It is divisible by 6.

d.It is divisible by 8.

Question 35

Which of these numbers is divisible by 3 and 5?

a. 27

b. 39

c. 75

d. 145

Question 36

What is the 20th number that is divisible by 8?

Question 37

Even numbers are divisible by 2.

This statement is:

a. true all the time

b. true only some of the time

c. false all the time

Question 38

True or false?

5 is divisible by 15.

a. True

b. False

Question 39

Select the pair of numbers that are both divisible by 5.

a. ○ 20 and 42

b. ○ 97 and 103

c. ○ 85 and 230

Question 40

$\sqrt{144} - \sqrt{64} \div 4 =$ ☐

Question 41

$50 - \sqrt{25} \times 3 =$ ☐

Question 42

$5 \times 7^2 + \sqrt{121} =$ ☐ $=$ ☐ ^{2}

Question 43

$$\frac{\sqrt{324}}{\sqrt{36}} = \square$$

Question 44

Work out the value of ? to complete this calculation.

$\sqrt{? \times 4} = 10$

? = ☐

Question 45

The formula for the area of a square is:

Area = (length of side)^2

If the area of a square is 289 cm^2, what is the length of the side?

Length of side = ☐ cm

Question 46

True or false?

$9^2 - 5^2 = (9 - 5)^2$

a. True

b. False

Question 47

What is the cube root of 125?

$\sqrt[3]{125}$ = ☐

Question 48

Evaluate: $4 + -3 - -5$ = ☐

Question 49

Evaluate: $1 + -2 - -4 =$ ☐

Question 50

Enter the next number in this pattern.

$-4, -9, -7, -12, -10, -15,$ ☐

Question 51

Write $-2\frac{3}{10}$ as a decimal.

☐

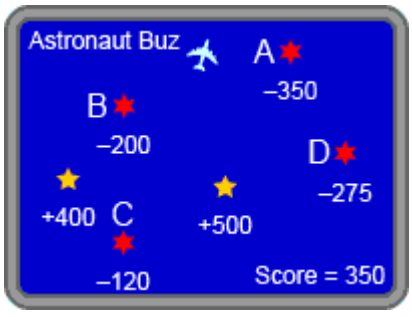
Question 52

Enter the next number in this pattern.

$12, -2, -17, -33, -50,$ ☐

Question 53

In a computer game, Buz's space craft bumped into two asteroids (minus points), and destroyed two klangers (plus points). The screen shows the asteroids and klangers near to Buz. Buz's score was 350.



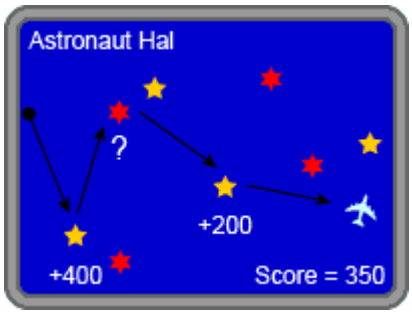
Which two asteroids did he bump into?

a. A and D b. C and D c. A and B d. C and B

Question 54

In a computer game, Hal's space craft bumped into one asteroid (minus points), and destroyed two klangers (plus points).

Hal's path is shown on the screen. His score was 350.



A bug in the program left the points off the asteroid that Hal hit.

The missing number in

$+400 + \square + +200 = 350$

is:

Question 55

What number is 0.5 *more* than -8?

Question 56

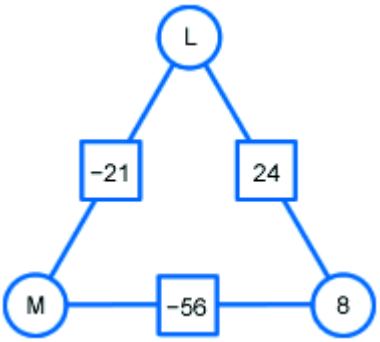
Which is furthest away from 0?

a. $-3 - +2$ b. $3 - -3$ c. $3 + -3$ d. $2 - -2$

Question 57

The numbers in the circles multiply to give the numbers in the squares between them.

Work out the missing numbers L and M, and then find the sum of the three circled numbers.



L = ☐
M = ☐
8 + L + M = ☐

Question 58

Calculations inside grouping symbols must be done first.

What is the missing number in:

$-54 \div (\square \div 3) = -6$?

Question 59

Calculations inside grouping symbols must be done first.

Enter the missing number:

$-60 \div (\square \div 5) = -6$?

Question 60

$40 \div -5 =$ ☐

Question 61

Which of the following statements is true?

a. $(2 \times 3) + (-7) = -8$ b. $(2 + 3) \times (-7) = -35$ c. $2 \times (-3) - 7 = -1$ d. $(2 - 3) \times (7) = 7$

Question 62

Which of the following statements is true?

a. $(2 \times 4) + (-8) = -16$ b. $(2 + 4) \times (-8) = -30$ c. $2 \times (-4) - (-8) = 0$ d. $(2 - 4) \times (8) = 16$

Question 63

Simplify $-27 \div 3^3$.

$-27 \div 3^{\square} = \square$

Question 64

Fill in the two missing numbers in this pattern:

$-243, \square, -27, \square, -3, -1$

Question 65

What is the first multiple of 11 that is a Fibonacci number? $\square$

Question 66

What is the ***smallest*** number that is divisible by 2, 3 and 7?

$\square$

Question 67

What is the only palindromic 2-digit multiple of 5? $\square$

Question 68

List the first 3 multiples of 20 that are also square numbers.

(Write your answers in ascending order.)

$\square$, $\square$, $\square$

Question 69

Students are lining up in order.

- Every 3rd student is female.
- Every 8th student is wearing a green jumper.

In which position will the first female wearing a green jumper stand?

Position ☐

Question 70

Knowing multiples helps to do calculations mentally.

For example:

since $4 \times 25 = 100$
then $8 \times 25 = 200$
and $9 \times 25 = 8 \times 25 + 1 \times 25 = 225$.

Complete the following without using a calculator:

$12 \times 25 =$ ☐

$11 \times 25 =$ ☐

Question 71

The sum of the ***first five*** multiples of 8:

$$8 \times 1 + 8 \times 2 + 8 \times 3 + 8 \times 4 + 8 \times 5 = 8 + 16 + 24 + 32 + 40$$
$$= 120$$

Rather than adding, complete this multiplication to get the same result:

$8 \times$ ☐ $= 120$

Question 72

What is the difference between the 7th multiple of 15 and the 8th multiple of 15? ☐

Question 73

From the table, work out which type of number will have an odd number of factors.

Number	Factors
1	1
2	1, 2
3	1, 3
4	1, 2, 4
5	1, 5
6	1, 2, 3, 6
7	1, 7
8	1, 2, 4, 8
9	1, 3, 9
10	1, 2, 5, 10

a. Triangular numbers

b. Even numbers

c. Square numbers

d. Odd numbers

Question 74

What number is both a multiple *and* a factor of 24?

Question 75

A mystery number is divisible by 34.

Therefore it must also be divisible by 2 and ____.

Question 76

The common factors of two numbers are 2, 3 and 5.

What digit must both numbers end with?

Question 77

Many numbers have an *even* number of factors.

For example, the factors of 20 are:

1 and 20, 2 and 10, 4 and 5

Square numbers have an *odd* number of factors.

From the list below, select the square number.

a. ○ 36
b. ○ 42
c. ○ 80

Question 78

A number is divisible by 20. What other numbers is it divisible by?

(Write your answers in ascending order.)

[ ], [ ], [ ], [ ], [ ]

Question 79

The second largest factor of 36 is 18.

The second largest factor of 81 is 27.

What would be the second largest factor of 144?

[ ]

Question 80

The highest common factor of two numbers is 15.

These two numbers could be:

a. 5, 15
b. 10, 30
c. 60, 80
d. 15, 3000

Question 81

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

If you add the digits of each multiple of 9, you get a multiple of 9, eg:

36 3 + 6 = 9

783 7 + 8 + 3 = 18

One digit is missing from each of the multiples of 9 below. Enter the missing digit for each number.

71 ☐

2 ☐ 20

1 ☐ 1 010

☐ 000 000

Question 82

What is the smallest number divisible by 2, 3, 5 and 9?

☐

Question 83

A number is even and divisible by 3. It is more than 30 and less than 40.

What is the number?

☐

Question 84

Remember that whole numbers are 0, 1, 2, 3, 4, ...

Which one of the following statements is true?

The square root of a whole number is always:

a. bigger than the number

b. smaller than the number

c. equal to or less than the number

d. a whole number

Question 85

Investigate the pattern of square numbers below:

$5^2 = 25$
$15^2 = 225$
$25^2 = 625$
$35^2 = 1225$
$45^2 = 2025$

Without using a calculator, use this pattern to evaluate:

$\sqrt{4225} =$ [ ]

Question 86

Complete the following calculation. $\sqrt{169} = \sqrt{13^2} = 13$

$\sqrt{289} = \sqrt{17^2} = 17$

$\sqrt{n^2} =$ [ ]

Question 87

Clare used her calculator to find that:

$\sqrt{9+16} = 19$

Was her answer correct?

a. Yes, $\sqrt{9+16} = 19$

b. No, $\sqrt{9+16} = 3 + 4 = 7$

c. No, $\sqrt{9+16} = \sqrt{25} = 5$

d. The answer cannot be found using a calculator.

Question 88

Are the following statements true or false?

Statement 1: $\sqrt{4 \times 25} = \sqrt{4} \times \sqrt{25}$

Statement 2: $\sqrt{4+25} = \sqrt{4} + \sqrt{25}$

a. Both statements are true.

b. Both statements are false.

c. Statement 1 is true and statement 2 is false.

d. Statement 1 is false and statement 2 is true.

Question 89

The square root of 45 will lie between which two whole numbers?

(Enter the smallest number first.)

[ ] and [ ]

Question 90

Complete this statement without using your calculator.

$\sqrt{20}$ lies between:

a. 19 and 21

b. 2 and 3

c. 4 and 5

Question 91

Complete the following calculation.

$\sqrt[3]{8 \times 27} =$ ☐