# ITL Public School
## Answer Key Summative Assessment - 1 (2015-16)
## Mathematics – Set A

**Date:** **Class: VI**

**Time: 3 hrs** **M. M: 90**

*General Instructions:*

1. *Read the question paper carefully and answer legibly.*
2. *All questions are compulsory.*
3. *The question paper consist of 31 questions divided into four sections A,B,C and D*
4. *Section A comprises of 4 question of 1 mark each, section B comprises of 6 questions of 2 marks each, Section C comprises of 10 questions of 3 marks each and Section D comprises of 11 questions of 4 marks each*
5. *Use of calculators is not permitted.*

**Section – A**

Q1. Write the number of faces a cube has. 1
6

Q2. Give an example of a regular quadrilateral. 1
Square

Q3. Write the greatest negative integer. 1
-1

Q4. What will be the HCF of two consecutive even numbers? 1
2

**Section – B**

Q5. a) Find the product of the successor and predecessor of 99. 1
$100 \times 98 = 9800$ 1

b) How many whole numbers are there between 24 and 49
$49 - 24 = 25$
$25 - 1 = 24$

Q6. a) What is 9 more than (-8) equal to? 1
$9 + (-8) = 9 - 8 = 1$ 1

b) Write the predecessor of (-5)
-6

Q7. Write the number names for:

a) 76,54,90,786 – Seventy six crore fifty four lakh ninety thousand seven hundred eighty six 1

b) 2,458,765 – Two million four hundred fifty eight thousand seven hundred sixty five 1

Q8. Shikha is rowing a boat due north east. In which direction will she be rowing if she turns it through: 2

a) A straight angle – south west
b) A complete angle – north east

Q9. Find the product of the smallest prime number and smallest composite number. 2
Smallest prime no. = 2 smallest composite number = 4
Product = 8

Q10. Draw a rough diagram of two angles such that they have one ray in common. 2
Correct figure (1 mark), correct labelling (1 mark)

**Section – C**

Q11. Arrange the following integers in ascending order: 3
-53, 15, 35, -23, 0, -12
$-53 < -23 < -12 < 0 < 15 < 35$ ( ½ mark each correct entry)

Q12. Using divisibility rules find:

a) 713289 is divisible by 11 or not. 1.5
Odd places = 9 + 2 + 1 = 12 ( ½ ) Even places = 8 + 3 + 7 = 18 ( ½ ) 1.5
Difference = 18 – 12 = 6 not divisible by 11. So 713289 is not divisible by 11. ( ½ )

b) 29354 is divisible by 6 or not.

29354 is divisible by 2 since it has 4 in its unit's place. ( ½ )
2 + 9 + 3 + 5 + 4 = 23 which is not divisible by 3 sp 29354 is not divisible by 3. ( ½ )
Hence 29354 is not divisible by 6. ( ½ )

Q13. Draw a rough sketch of a pentagon and draw its diagonals. Write the number of the diagonals it has. 3

Each part 1 mark. No.of diagonals are 5

Q14. After simplifying put appropriate sign in the box. 3

(-36) + (-24) _____ 36 – (-24)
-36 – 24 _____ 36 + 24 ( 1 mark )
- 60 _____ 60 ( 1 mark )
-60 < 60 ( 1 mark )

Q15. The number of sheet of paper for making a notebook is 7000. Each sheet makes 12 pages of a notebook. Each notebook has 300 pages. Find how many notebooks can be made from the paper available. 3

Number of sheets = 7000
Number of pages made from 1 sheet = 12 ( ½ )
Number of pages made from 7000 sheets = 7000 × 12 = 84000 ( 1 mark )
Number of pages in 1 notebook = 300
Number of notebooks which could be made = 84000 ÷ 300 = 280 ( 1 mark )
Hence 280 notebooks can be made ( ½ )

Q16. Find using suitable properties: 3

a) 8 × 3098 × 125
8 × 125 × 3098 ( ½ ) = 1000 × 3098 ( ½ ) = 3098000 ( ½ )
b) 349 × 97
349 × ( 100 – 3 ) ( ½ )= 349 × 100 – 349 × 3 ( ½ ) = 34900 – 1047 = 33853 ( ½ )

Q17. Three pieces of wood measuring 91 m, 112 m and 49 m long have to be divided into planks of equal length. What is the greatest possible length of each plank? 3

Length of the three pieces of wood = 91m, 112m, 49m
Greatest possible length of each plank = HCF of 91, 112 and 49 (1 mark)
Working (1 mark) Answer = 7 ( ½ ) Hence statement ( ½ )

Q18. Draw a rough diagram for each of the following:

a) A closed curve that is not a polygon. (1½ marks) 1.5
b) An open curve made up entirely of line segments. (1½ marks) 1.5

Q19. a) Look at your watch. How many right angles do the minute hand moves between 8 a.m. to 10.30 a.m.? 2

10 1

b) Name the type of triangle in two different ways: ΔPQR with $\angle Q = 90^0$ and PQ = QR.
Isosceles right angled triangle

Q20. The sum of two integers is (-45). If one of them is 90, find the other? 3

A + 90 = -45
A = - 45 – 90 = -135

## Section – D

Q21. Draw a circle and mark: 4

a) its centre (½) b) its radius (½) c) a segment (1) d) a sector (1) e) an arc (1)

Q22. a) Determine whether 25395 is divisible by 12 or not using divisibility rules. 3

To check whether it is divisible by 12 or not we should check whether it is divisible by 3 and 4.
2 + 5 + 3 + 9 + 5 = 24 divisible by 3 so 25395 is divisible by 3
But 95 is not divisible by 4 hence 25395 is not divisible by 4.
Hence 25395 is not divisible by 12.

b) I am the smallest number, having three different prime factors. Find me.
2 × 3 × 5 = 30 1

Q23. a) Estimate the sum by rounding off to the nearest hundreds: 2161 + 3721 + 1529 3
2200 + 3700 + 1500 = 7400

b) Write 499 in Roman Numerals. 1
CDXCIX

Q24. Find the smallest 4-digit number which when divided by 6, 15 and 18 leave remainder 5 in each case. 4

Smallest number divisible by 6, 15 and 18 = LCM of 6, 15 and 18 ( ½ )
Working (1 mark) answer = 90 ( ½ )
Smallest 4-digit multiple of 90
90, 180, 270, 360, 450, 540, 630, 720, 810, 900, 990, 1080. (1 mark)
Hence 1080 + 5 = 1085 is the smallest 4 digit number which gives remainder 5 when divided by 6, 15 and 18. (1 mark)

Q25. a) Draw an angle of $125^0$ using protractor. 3

b) Write the measure of a straight angle. $180^0$ 1

Q26. a) Use number line to find (-5) + 7 = +2 2

b) Find without using number line: (-31) + (-20) – (-25) 2

-31 – 20 + 25 = -51 + 25 = -26

Q27. Write the number of faces, edges and corners/vertices of a triangular pyramid. What is another name of a triangular pyramid? 4

Faces = 4, edges = 6 = vertices = 4 triangular pyramid. (1 mark each)

Q28. Draw a quadrilateral PINK (1 mark) . Label it properly (1 mark). State: 4

a) Two pairs of opposite sides PI and NK ; PK and IN (1 mark)
b) Two pairs of adjacent angles ∠P and ∠I ; ∠N and ∠K (1 mark)

Q29. a) Find the HCF of 75, 60 and 100 by long division method. 3

Working ( 2 marks), Answer = 5 (1 mark)

b) Express 24 as the sum of two odd primes.

19 + 5 1

Q30. A businessman started a business of bats and balls. He bought each bat at a cost of Rs. 1875 and a ball at a cost of Rs. 125. If he bought 675 bats and 675 balls. Find the total amount he has spent. He then sold a bat at Rs. 2100 and offered a ball free to every customer. What can you say about this businessman? Describe his quality which you can observe through this act of his. 3

Statements ( ½ )
Total bill = 675 × 1875 + 675 × 125 ( ½ mark)
675 × (1875 + 125) (1 mark) = 675 × 2000 = 1350000 (1 mark)
Value based (1 mark) 1

Q31. a) The town newspaper is published every day. One copy has 15 pages. Everyday 12,180 copies are printed. Find how many total pages are printed every day? 2 + 2

No.of pages in 1 copy = 15
No.of copies = 12180
Total no.of pages = 12180 × 15 = 182700

b) A vessel contains 4 *l* and 500 *ml* of milk. Find in how many glasses, each of 45 *ml* capacity, can it be filled?

Quantity of milk = 4000 + 500 = 4500 ml
Quantity of glass = 45 ml
No.of glasses = 4500 ÷ 45 = Quotient 100

# Answer Key Summative Assessment - 1 (2015-16)
# Mathematics – Set B

## Section – A

Q1. Write the number of faces a cuboid has. 1
6

Q2. What will be the HCF of two consecutive odd numbers? 1
1

Q3. Give an example of a regular quadrilateral. 1
Square

Q4. Write the greatest negative integer. 1
-1

## Section – B

Q5. a) Find the product of the successor and predecessor of 999. 1
Successor = 1000, Predecessor = 998 product = 998000 1

b) How many whole numbers are there between 25 and 49?
49 – 25 = 24, 24 – 1 = 23

Q6. a) What is 8 more than (-9) equal to? 1
8 + (-9) = 8 – 9 = -1 1

b) Write the successor of (-5)
-4

Q7. Write the number names for:

a) 765,490,786 - Seven hundred sixty five million four hundred ninety thousand seven hundred and eighty six 1 1

b) 24,58,765 – twenty four lakh fifty eight thousand seven hundred sixty five

Q8. Shikha is rowing a boat due north west. In which direction will she be rowing if she turns it through: 2

a) A straight angle – south east
b) A complete angle – north west

Q9. Find the product of the smallest prime number and smallest composite number. 2
Smallest prime no. = 2 smallest composite number = 4
Product = 8

Q10. Draw a rough diagram of two angles such that they have one ray common. 2
Correct figure (1 mark), correct labelling (1 mark)

## Section – C

Q11. Arrange the following integers in descending order: 3
-53, 15, 35, -23, 0, -12
35 > 15 > 0 > -12 > -23 > -53 ( ½ mark each correct entry)

Q12. Using divisibility rules find:

a) 715689 is divisible by 11 or not. 1.5
Odd places = 9 + 6 + 1 = 16 ( ½ ) Even places = 8 + 5 + 7 = 20 ( ½ ) 1.5
Difference = 20 – 16 = 4 not divisible by 11. So 715689 is not divisible by 11. ( ½ )

b) 29834 is divisible by 6 or not.
29834 is divisible by 2 since it has 4 in its unit's place. ( ½ )
2 + 9 + 8 + 3 + 4 = 26 which is not divisible by 3 sp 29834 is not divisible by 3. ( ½ )

Q13. Draw a rough sketch of a pentagon and draw its diagonals. Write the number of the diagonals it has. 3
Each part 1 mark. No.of diagonals are 5

Q14. After simplifying put appropriate sign in the box. 3

(-25) + (-15) _____ 25 – (-15)

-25 – 15 _____ 25 + 15 (1 mark)

-40 _____ 40 (1 mark)

-40 < 40 (1 mark)

Q15. The number of sheet of paper for making a notebook is 6000. Each sheet makes 12 pages of a notebook. Each notebook has 400 pages. Find how many notebooks can be made from the paper available. 3

Number of sheets = 6000

Number of pages made from 1 sheet = 12 ( ½ )

Number of pages made from 7000 sheets = 6000 × 12 = 72000 ( 1 mark )

Number of pages in 1 notebook = 400

Number of notebooks which could be made = 72000 ÷ 400 = 180 ( 1 mark )

Hence 180 notebooks can be made ( ½ )

Q16. Find using suitable properties: 3

a) 8 × 1099 × 125

8 × 125 × 1099 ( ½ ) = 1000 × 1099 ( ½ ) = 1099000 ( ½ )

b) 239 × 98

239 × ( 100 – 2 ) ( ½ )= 239 × 100 – 239 × 2 ( ½ ) = 23900 – 478 = 23422 ( ½ )

Q17. Three pieces of wood measuring 70 m, 105 m and 175 m long have to be divided into planks of equal length. What is the greatest possible length of each plank? 3

Length of the three pieces of wood = 70m, 105m, 175m

Greatest possible length of each plank = HCF of 70, 105 and 175 (1 mark)

Working (1 mark) Answer = 35 ( ½ ) Hence statement ( ½ )

Q18. Draw a rough diagram for each of the following:

a) A closed curve that is not a polygon. (1½ marks) 1.5

b) An open curve made up entirely of line segments. (1½ marks) 1.5

Q19. a) Look at your watch. How many right angles do the minute hand moves between 8 a.m. to 11.30 a.m.? 2

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**Section – D**

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a) its centre (½) b) its radius (½) c) a segment (1) d) a sector (1) e) an arc (1)

Q22. a) Determine whether 55395 is divisible by 12 or not using divisibility rules. 3

To check whether it is divisible by 12 or not we should check whether it is divisible by 3 and 4. 1

5 + 5 + 3 + 9 + 5 = 27 divisible by 3 so 55395 is divisible by 3

But 95 is not divisible by 4 hence 55395 is not divisible by 4.

Hence 55395 is not divisible by 12.

b) I am the smallest number, having three different prime factors. Find me.

2 × 3 × 5 = 30

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2700 + 3300 + 1500 = 7500

b) Write 499 in Roman Numerals.
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Q24. Find the smallest 4-digit number which when divided by 6, 15 and 18 leave remainder 5 in each case. 4

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Working (1 mark) answer = 90 ( ½ )
Smallest 4-digit multiple of 90
90, 180, 270, 360, 450, 540, 630, 720, 810, 900, 990, 1080. (1 mark)
Hence 1080 + 5 = 1085 is the smallest 4 digit number which gives remainder 5 when divided by 6, 15 and 18. (1 mark)

Q25. a) Draw an angle of $135^0$ using protractor. 3
b) Write the measure of a right angle. $180^0$ 1

Q26. a) Use number line to find (-7) + 5 = -2 2
b) Find without using number line: (-34) + (-21) – (-20) 2
-34 – 21 + 20 = - 55 + 20 = -35

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Value based (1 mark)

Q31. a) The town newspaper is published every day. One copy has 12 pages. Everyday 12,280 copies are printed. Find how many total pages are printed every day? 2 + 2
No.of pages in 1 copy = 15
No.of copies = 12280
Total no.of pages = 12180 × 15 = 184200
b) A vessel contains 3 *l* and 500 *ml* of milk. Find in how many glasses, each of 35 *ml* capacity, can it be filled?
Quantity of milk = 3000 + 500 = 3500 ml
Quantity of glass = 35 ml
No.of glasses = 3500 ÷ 35 = Quotient 100