

Half Yearly Examination 2019-20

Sub. : Mathematics

Class : VI

Time : 2.30 Hrs.

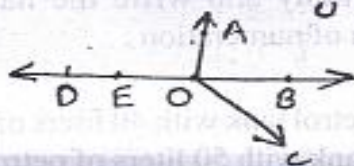
M.M. : 80

General Instructions :

- i) All questions are compulsory.
- ii) This question paper contains 30 questions divided into 4-sections A, B, C and D.
- iii) Section-A comprises of 6 questions 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 8 questions of 4 marks each.
- iv) Use of Calculators is not permitted.

Section-A

- Q.1 Write in Roman Numerals-
- a) 69
 - b) 98
- Q.2 Write the successor of :
- a) 100199
 - b) 20999
- Q.3 Write the all factors of 27.
- Q.4 Use the figure to name any two line segments :

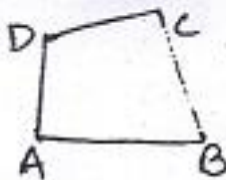


- Q.5 Write down any two measures of obtuse angles.
- Q.6 Represent the following numbers on a number line :
- a) +5
 - b) -6

Section-B

- Q.7 Estimate the following using general rules :
- $$5290 + 17,986$$
- Q.8 Find the value using property and write the property name :
- $$54279 \times 92 + 54279 \times 8$$

Q.9 Name the all angles in given figure :



Q.10 Draw the angles by protractor :

a) $m\angle A = 60^\circ$

b) $m\angle B = 150^\circ$

Q.11 Use the number line and add :

a) $9 + (-6)$

b) $5 + (-11)$

Q.12 Express the following as mixed fractions :

a) $\frac{20}{3}$

b) $\frac{11}{5}$

Section-C

Q.13 a) Insert commas suitably and write the names according to Indian system of numeration :

87595762

b) Insert commas suitably and write the names according to International system of numeration :

78921092

Q.14 A taxi driver filled his car petrol tank with 40 liters of petrol on Monday. The next day he filled the tank with 50 liters of petrol. If the petrol cost ₹ 44 per litre, how much did he spend in all on petrol?

Q.15 Using divisibility test, determine the following number is divisible by 11 or not?

901153

Q.16 Find the LCM of 20, 25 and 30

Q.17 Draw a rough sketch of a quadrilateral "KLMN", state :

a) two pairs of opposite sides.

b) two pairs of adjacent sides.

Q.18 Fill in the blanks :

a) A cube has



Faces _____

Edges _____

Corners _____

b) A square pyramid



Faces _____

Edges _____

Corners _____

Q.19 Fill in the blanks :

a) $(-3) + (-6)$ _____ $(-3) - (-6)$

b) $(-21) - (-10)$ _____ $(-31) + (-11)$

c) $45 - (-11)$ _____ $60 + (-4)$

Q.20 Find :

a) $(-7) - 8 - (-25)$

b) $50 - (-40) - (-2)$

Q.21 Reduce the following fractions to simplest form :

a) $\frac{40}{60}$

b) $\frac{150}{60}$

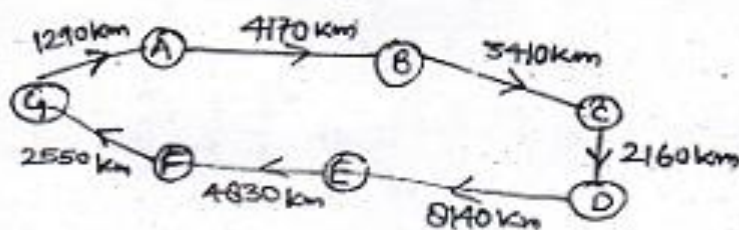
c) $\frac{84}{98}$

Q.22 Shubham painted $\frac{2}{3}$ of the wall space in his room. His sister Madhavi helped and painted $\frac{1}{3}$ of the wall space. How much did they paint together?

Section-D

Q.23 The number of sheets of paper available for making notebooks 75,000. Each sheet makes 8 pages of a notebook. Each notebook contains 200 pages. How many notebooks can be made from the paper available?

Q.24 A bus started its journey and reached different places with a speed of 60km/hour. The journey shown in figure :



- a) Find the total distance covered by the bus, if it starts from A and returns back to A.
 b) Find the difference of distances from A to D and D to E.

Q.25 Find product using suitable property, write property name also :

- a) 258×1008 b) 1005×168

Q.26 Three tankers contain 403 liters, 434 liters and 465 liters of diesel respectively. Find the max. capacity of a container that can measure the diesel of three containers exact number of times.

Q.27 Draw any circle and mark.

- a) its centre b) a radius c) a diameter
 d) a sector e) a segment f) a point in its interior
 g) a point in its exterior h) an arc.

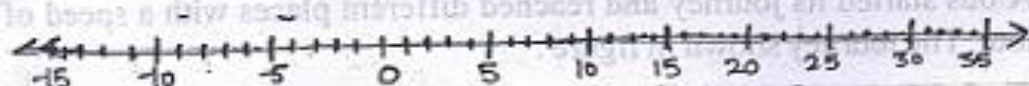
Q.28 What fraction of a clockwise revolution does the hour hand of a clock turn through, when it goes from.

- a) 3 to 9 b) 4 to 7
 c) 7 to 10 d) 12 to 9

Q.29 Following is the list of temperatures of five places in India on a particular day of the year :

Place	Temp.
Siachin	10°C below 0°C
Shimla	2°C below 0°C
Ahmedabad	30°C above 0°C
Delhi	20°C above 0°C

- a) Write the temp. of these places in the form of integers.
 b) Following is the number line representing the temperature in degree celsius. Plot the name of city against its temp.



Q.30 Solve :

- a) $\frac{2}{3} + \frac{1}{7}$ b) $\frac{3}{10} + \frac{3}{15}$ c) $\frac{4}{3} - \frac{1}{2}$ d) $\frac{5}{6} - \frac{1}{3}$

SUBJECT: MATHEMATICS
BLUE PRINT FOR HALF YEARLY EXAM- 2019-20: CLASS VI

Topic	VSA(1marks)	SA(2marks)	SA(3marks)	LA(4marks)	Total
Knowing our Numbers	1(1)	1(2)	1(3)	2(8)	5(14)
Whole Numbers	1(1)	1(2)	1(3)	1(4)	4(10)
Playing with Number	1(1)		2(6)	1(4)	4(11)
Basic Geometric Ideas	1(1)	1(2)	1(3)	1(4)	4(10)
Understanding Elementary Ideas	1(1)	1(2)	1(3)	1(4)	4(10)
Integers	1(1)	1(2)	2(6)	1(4)	5(13)
Fractions		1(2)	2(6)	1(4)	4(12)
Total	6(6)	6(12)	10(30)	8(32)	30(60)

Marking scheme for half yearly exam

Section	Marks	No. of Questions	Total
VSA	1	6	06
SA-I	2	6	12
SA-II	3	10	30
LA	4	8	32
		Grand Total	80

Marking Scheme

* Section A *

- Ans. 1. (A) $69 = LXIX$ $\frac{1}{2}$ mark
(B) $98 = XCVIII$ $\frac{1}{2}$ mark.
- Ans. 2. (A) successor of $100199 = 100200$ $\frac{1}{2}$ mark
(B) successor of $200999 = 201000$ $\frac{1}{2}$ mark
- Ans. 3. factors of $27 = 1, 3, 9, 27$. 1 mark
- Ans. 4. \overline{DE} or \overline{EB} , \overline{OB} , or \overline{DB} - etc
 \overline{OA} , \overline{OB} , \overline{OC} 1 mark.
for two correct ans.
- Ans. 5. two measures of obtuse angles
between 90° and 180° 1 mark for two
correct answers.

- Ans. 6. (a)  $\frac{1}{2}$ mark
(b)  $\frac{1}{2}$ mark.

* Section B *

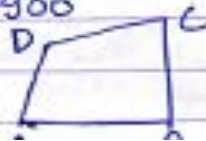
- Ans. 7. $5,290 + 17,986$
 $\therefore \because 5290 < 17,986$
so by general rule, estimating rounding off
thousand.
 $5290 \rightarrow 5,000$
 $17,986 \rightarrow 18,000$ 1 mark

\therefore Estimation

$$5,290 + 17,986 \rightarrow 5,000 + 18,000 = 23,000 \quad 1 \text{ mark.}$$

- Ans. 8. $54279 \times 92 + 54279 \times 8$
 $= 54279 \times (92 + 8)$ distributive property 1 mark
 $= 54279 \times 100$
 $= 5427900$ 1 mark.

Ans. 9.



4 mark for

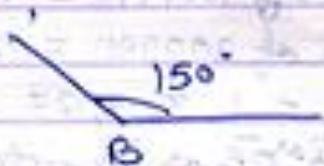
Ans. 10.

(a)



(1 mark)

(b)

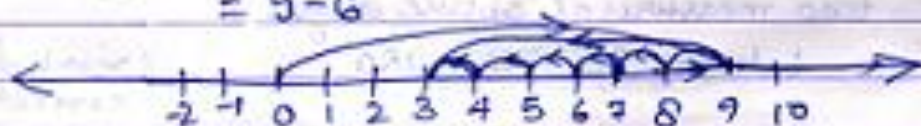


(1 mark)

Ans. 11.

(a)

$$9 + (-6) \\ = 9 - 6$$



(1/2 mark)

$$\therefore 9 + (-6) = 3$$

(1/2 mark)

(b)

$$5 + (-11) \\ = 5 - 11$$



(1/2 mark)

$$\therefore 5 + (-11) = -6$$

(1/2 mark)

Ans. 12.

(a)

$$\frac{20}{3} = 6\frac{2}{3}$$

(1 mark)

(b)

$$\frac{11}{5} = 2\frac{1}{5}$$

(1 mark)

Ans. 13.

* Section C *

(a)

8,75,95,762

(1/2 mark)

Eight crore seventy five ^{lakh} thousand ninety five thousand seven hundred sixty two.

(1 mark)

(b)

78,92,10,92

(1/2 mark)

Seventy eight billion nine hundred twenty one thousand ninety two.

(1 mark)

Ans 14. petrol filled on Monday = 40 litres
 petrol filled on Tuesday = 50 litres
 Total petrol = 40 + 50 = 90 litres (1/2 mark)

\therefore cost of 1 litre petrol = ₹ 44
 \therefore cost of 90 litres petrol = 44 × 90 = ₹ 3960 (1/2 mark)

Ans 15. 901153
 placing 6 5 4 3 2 1
 9 0 1 1 5 3 (1/2 mark)
 divisibility rule for 11.

sum of digits on odd places = 3 + 1 + 0 = 4
 sum of digits on even places = 5 + 1 + 9 = 15 (1 mark)

\therefore difference = 15 - 4 = 11 (1/2 mark)

\therefore 11 is divisible by 11. (1/2 mark)

So, 901153 is divisible by 11. (1/2 mark)

Ans 16. L.C.M of 20, 25 and 30

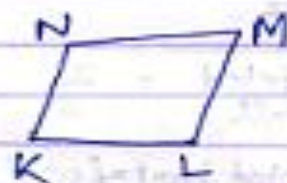
2	20, 25, 30
2	10, 25, 15
3	5, 25, 15
5	5, 25, 5
5	1, 5, 1
	1, 1, 1

(2 mark)

L.C.M. of 20, 25 and 30 = 2 × 2 × 3 × 5 × 5

= 300 (1 mark)

Ans 17.



- ①. Pairs of opposite sides:
 (KL & MN) and (LM and NK) (1/2 mark)
- ②. Pairs of adjacent sides

- Ans 18:
- | | |
|--|--|
| (a) A cube has | (b) A square pyramid |
| Faces - 6 $\left(\frac{1}{2}\text{ mark}\right)$ | Faces - 5 $\left(\frac{1}{2}\text{ mark}\right)$ |
| Edges - 12 $\left(\frac{1}{2}\text{ mark}\right)$ | Edges - 8 $\left(\frac{1}{2}\text{ mark}\right)$ |
| corners - 8 $\left(\frac{1}{2}\text{ mark}\right)$ | corners - 5 $\left(\frac{1}{2}\text{ mark}\right)$ |

Ans 19.

(a) $(-3) + (-6) < (-3) - (-6)$ (1 mark)

$$\frac{-9}{-9} < \frac{3}{3}$$

(b) $(-21) - (-10) > (-31) + (-11)$ (1 mark)

$$\frac{-11}{-11} > \frac{-42}{-42}$$

(c) $45 - (-11) = 60 + (-4)$ (1 mark)

$$\frac{56}{56} = \frac{56}{56}$$

Ans 20.

(a) $(-7) - 8 - (-25)$

$$= -7 - 8 + 25$$

$$= -15 + 25$$

$$= 10$$

(1 mark)

$\left(\frac{1}{2}\text{ mark}\right)$

(b) $50 - (-40) - (-2)$

$$= 50 + 40 + 2$$

$$= 92$$

(1 mark)

$\left(\frac{1}{2}\text{ mark}\right)$

Ans 21. (a) $\frac{48}{60} = \frac{4}{5}$ (1 mark)

(b) $\frac{150}{60} = \frac{155}{62} = \frac{5}{2}$ (1 mark)

(c) $\frac{84}{98} = \frac{6}{7}$ (1 mark)

Ans 22: shubham painted part of wall = $\frac{2}{3}$ $\left(\frac{1}{2}\text{ mark}\right)$

His sister painted part of wall = $\frac{1}{3}$ $\left(\frac{1}{2}\text{ mark}\right)$

\therefore They painted together = $\frac{2}{3} + \frac{1}{3}$ (1 mark)

Section D

Ans 23. number of sheet = 75000
1 sheet = 8 pages

∴ Total no. of pages = 75000×8
 $= 600,000$ pages. (2 mark)

Each note^{book} contains = 200 pages

∴ no. of notebooks = $6,00,000 \div 200$
 $= 3000$ notebook (2 mark)

Ans 24. (a)

A to B	=	4170 km
B to C	=	3410 km
C to D	=	2160 km
D to E	=	8140 km
E to F	=	4830 km
F to G	=	2550 km
G to A	=	1290 km

Total distance = 26550 km (2 marks)

(b) A to D distance = $4170 + 3410 + 2160$
 $= 9740$ km

D to E distance = 8140 km

∴ difference = 9740 km
 $- 8140$ km
1600 km

(2 mark)

Ans. 25. (a)

$$\begin{aligned} & 258 \times (1008) \\ &= 258 \times (1000 + 8) \\ &= 258 \times 1000 + 258 \times 8 \\ &= 258000 + 2064 \\ &= 260064 \end{aligned}$$

distributive prop.
(1 mark)

$$\begin{aligned}
 \text{(b). } & 1005 \times 168 \\
 & = (1000 + 5) \times 168 \quad \text{distributive property} \\
 & = 1000 \times 168 + 5 \times 168 \quad (1 \text{ mark}) \\
 & = 168000 + 840 \\
 & = 168840 \quad (1 \text{ mark})
 \end{aligned}$$

Ans 26. Cp. that:

403 liters, 434 liters, 465 liters
 max. capacity = ? (H.C.F)

$$\begin{array}{r}
 13 \overline{) 403} \\
 \underline{31} \\
 31 \\
 \hline
 0
 \end{array}$$

$$\begin{array}{r}
 2 \overline{) 434} \\
 \underline{7} \\
 217 \\
 \underline{217} \\
 \hline
 0
 \end{array}$$

$$\begin{array}{r}
 3 \overline{) 465} \\
 \underline{5} \\
 155 \\
 \underline{155} \\
 \hline
 0
 \end{array}$$

(2 marks)

$$403 = 13 \times 31$$

$$434 = 2 \times 7 \times 31$$

$$465 = 3 \times 5 \times 31$$

$$\text{H.C.F} = 31$$

\therefore max. capacity of container = 31 l. (1 mark)

$$\text{So, } 403 \text{ l} = 13 \text{ containers}$$

$$434 \text{ l} = 14 \text{ containers}$$

$$465 \text{ l} = 15 \text{ containers} \quad (1 \text{ mark})$$

Ans 27.



(a) centre O
 (1/2 mark)

(b) radius OA or OB or OC
 (1/2 mark)

(c). diameter AC
($\frac{1}{2}$ mark)

(d). a sector OAB shaded part
($\frac{1}{2}$ mark)

(e). segment ED shaded part
($\frac{1}{2}$ mark)

(f). a point in its interior F
($\frac{1}{2}$ mark)

(g). a point its exterior G
($\frac{1}{2}$ mark)

(h). an arc \widehat{AB} or \widehat{BC}
($\frac{1}{2}$ mark)

Ans. 28.

(a)

3 to 9



$\frac{1}{2}$ revolution
(1 mark)

(b) 4 to 7

$\frac{1}{4}$ revolution

(1 mark)

(c) 7 to 10

$\frac{3}{4}$ revolution
(1 mark)

(d) 12 to 9

$\frac{3}{4}$ revolution
(1 mark)

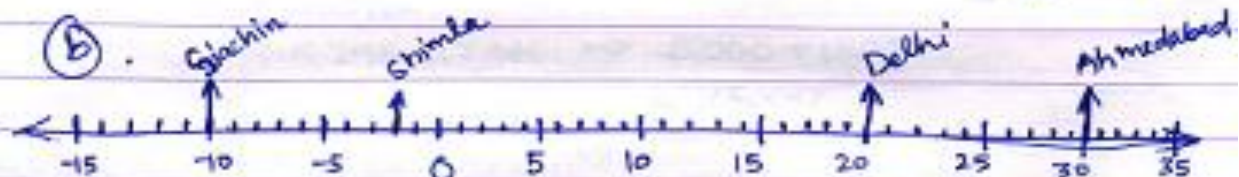
Ans. 29.

(a). Siachin -10°C ($\frac{1}{2}$ mark)

Shimla -2°C ($\frac{1}{2}$ mark)

Ahmedabad $+30^{\circ}\text{C}$ ($\frac{1}{2}$ mark)

Delhi $+20^{\circ}\text{C}$ ($\frac{1}{2}$ mark)



$\frac{1}{2}$ mark for each city (correct ans).

Ans-30.

(a) $\frac{2}{3} + \frac{1}{7}$

(b) $\frac{3}{10} + \frac{3}{15}$

L.C.M. = $3 \times 7 = 21$ L.C.M. = $2 \times 3 \times 5 = 30$

$= \frac{(2 \times 7) + (1 \times 3)}{21}$

$= \frac{(3 \times 3) + (3 \times 2)}{30}$

$= \frac{14 + 3}{21}$

$= \frac{9 + 6}{30}$

~~$\frac{17}{21}$~~ $= \frac{17}{21}$

$= \frac{15}{30}$

(1 mark)

~~$\frac{17}{21}$~~

$= \frac{1}{2}$

(1 mark)

(c) $\frac{4}{3} - \frac{1}{2}$

(d) $\frac{5}{6} - \frac{1}{3}$

L.C.M. = $3 \times 2 = 6$

L.C.M. = $2 \times 3 = 6$

$= \frac{(4 \times 2) - (1 \times 3)}{6}$

$= \frac{(5 \times 1) - (1 \times 2)}{6}$

$= \frac{8 - 3}{6}$

$= \frac{5 - 2}{6}$

$= \frac{5}{6}$

$= \frac{3}{6} = \frac{1}{2}$

(1 mark)

(1 mark)