Brilliant Public School , Sitamarhi

Class -VI

Mathematics

Sitamarhi Talent Search

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Brilliant Public School, Sitamarhi Talent Search 2013

CLASS – VI MATHEMATICS

1. The greatest five digit number formed with the digits 8, 5, 2 and 1 is

(a) 85512 (b) 88512 (c) 88521 (d) 88152

2. The difference of any "two" consecutive whole numbers is

(a) 0 (b) 1 (c) 2 (d) 3

3. The smallest composite number is

(a) 2 (b) 6 (c) 4 (d) 8

4. The sum of two odd number is always

(a) even (b) odd (c) both (a) & (b) (d) None of these

5. 34 × 205 is same as

(a) (30+4)×205 (b) 34×(200+5) (c) both (a) & (b) (d) None of these

6. The smallest 3–digit number which does not change if digits are written in reverse order is

(a) 111 (b) 010 (c) 101 (d) None of these

7. The smallest prime number is

(a) 2 (b) 1 (c) 3 (d) None of these

8. $\square$ – 100 = 999

(a) 1001 (b) 1099 (c) 1100 (d) None of these

9. The difference between the place value and the face value of 7 in 9728 is

(a) 7 (b) 0 (c) 707 (d) 693

10. A number is divisible by both 5 and 7. By which other number will that number be always divisible?

(a) 21 (b) 35 (c) 14 (d) 28

11. Which of the following numbers is equal to 1 billion?

(a) 10 lakh (b) 1 crore (c) 100 crore (d) 10 crore

12. 1 year is

(a) 7860 hours (b) 8760 hours (c) 7980 hours (d) 7680 hours

13. The value of 9307 x 937 – 9307 x 837 is

(a) 93700 (b) 930700 (c) 930070 (d) 900730

14. 1 kilogram is

(a) 10000 mg (b) 100000 mg (c) 1000000 mg (d) 1000 mg

15. The product of the place values of two 5's in 75352 is

(a) 2500 (b) 25000 (c) 2500000 (d) 250000

16. The Roman numeral of 99 is

(a) LIX (b) LXXIX (c) XCIX (d) IXC

17. If $x \div a = x$, then a is

(a) $\frac{1}{x}$ (b) 0 (c) 1 (d) x

18. The predecessor of 700,800 is

(a) 7,00,800 (b) 7,00,801 (c) 7,00,799 (d) None of these

19. In which of the following expressions, prime factorization has been done?

(a) $12 = 3 \times 4$ (b) $168 = 2 \times 2 \times 2 \times 3 \times 7$ (c) $150 = 2 \times 3 \times 25$ (d) $324 = 2 \times 2 \times 3 \times 27$

20. The number 75847 rounded to the nearest hundred is

(a) 76000 (b) 77800 (c) 75800 (d) 75850

21. 650 = ☐ × 23 + 6

(a) 30 (b) 621 (c) 28 (d) 22

22. The Hindu-Arabic numeral for the Roman numeral CCCXL is

(a) 350 (b) 190 (c) 210 (d) 340

23. The estimated quotient 2649 ÷ 134 by rounding off both the numerator and the denominator to the nearest hundred is

(a) 28 (b) 27 (c) 20 (d) 26

24. The largest four digit number x smallest two digit number is

(a) 100000 (b) 99999 (c) 99990 (d) 99900

25. What must be added to 34,52,629 to make it equal to 6 crore?

(a) 6,34,52,629 (b) 5,69,47,390 (c) 5,65,47,371 (d) 5,34,52,629

Answers:

1. **The greatest five digit number formed with the digits 8, 5, 2 and 1 is**

   (a) 85512 (b) 88512 (c) 88521 (d) 88152

2. **The difference of any "two" consecutive whole numbers is**

   (a) 0 (b) 1 (c) 2 (d) 3

3. **The smallest composite number is**

   (a) 2 (b) 6 (c) 4 (d) 8

4. **The sum of two odd number is always**

   (a) even (b) odd (c) both (a) & (b) (d) None of these

5. **34 × 205 is same as**

   (a) (30+4)×205 (b) 34×(200+5) (c) both (a) & (b) (d) None of these

6. **The smallest 3–digit number which does not change if digits are written in reverse order is**

   (a) 111 (b) 010 (c) 101 (d) None of these

7. **The smallest prime number is**

   (a) 2 (b) 1 (c) 3 (d) None of these

8. **☐ – 100 = 999**

   (a) 1001 (b) 1099 (c) 1100 (d) None of these

9. **The difference between the place value and the face value of 7 in 9728 is**

   (a) 7 (b) 0 (c) 707 (d) 693

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    (a) 21 (b) 35 (c) 14 (d) 28

11. **Which of the following numbers is equal to 1 billion?**

    (a) 10 lakh (b) 1 crore (c) 100 crore (d) 10 crore

12. **1 year is**

    (a) 7860 hours (b) 8760 hours (c) 7980 hours (d) 7680 hours

13. The value of 9307 x 937 – 9307 x 837 is

(a) 93700 (b) 930700 (c) 930070 (d) 900730

14. 1 kilogram is

(a) 10000 mg (b) 100000 mg (c) 1000000 mg (d) 1000 mg

15. The product of the place values of two 5's in 75352 is

(a) 2500 (b) 25000 (c) 2500000 (d) 250000

16. The Roman numeral of 99 is

(a) L IX (b) L X X IX (c) X C IX (d) IX C

17. If x ÷ a = x, then a is

(a) $\frac{1}{x}$ (b) 0 (c) 1 (d) x

18. The predecessor of 700,800 is

(a) 7,00,800 (b) 7,00,801 (c) 7,00,799 (d) None of these

19. In which of the following expressions, prime factorization has been done?

(a) 12 = 3×4 (b) 168 = 2×2×2×3×7 (c) 150 = 2×3×25 (d) 324 = 2×2×3×27

20. The number 75847 rounded to the nearest hundred is

(a) 76000 (b) 77800 (c) 75800 (d) 75850

21. 650 = ☐ × 23 + 6

(a) 30 (b) 621 (c) 28 (d) 22

22. The Hindu-Arabic numeral for the Roman numeral CCCXL is

(a) 350 (b) 190 (c) 210 (d) 340

23. **The estimated quotient 2649 ÷ 134 by rounding off both the numerator and the denominator to the nearest hundred is**

(a) 28 (b) 27 (c) 20 (d) 26

24. The largest four digit number x smallest two digit number is

(a) 100000 (b) 99999 (c) 99990 (d) 99900

25. What must be added to 34,52,629 to make it equal to 6 crore?

(a) 6,34,52,629 (b) 5,69,47,390 (c) 5,65,47,371 (d) 5,34,52,629

Answers (Explanations):

1 The greatest five digit number formed with the digits 8, 5, 2 and 1 is **88521**

2 The difference of any "two" consecutive whole numbers is **1**

3 The smallest composite number is **4**

4 The sum of two odd number is always **even**

5 34 × 205 is same as **both (a) & (b)**

6 The smallest 3–digit number which does not change if digits are written in reverse order is **101**

7 The smallest prime number is **2**

8 **1099** – 100 = 999

9 The difference between the place value and the face value of 7 in 9728 is **693**

10 A number is divisible by both 5 and 7. By which other number will that number be always divisible? **35**

11 Which of the following numbers is equal to 1 billion? **100 crore**

12 1 year is **8760 hours**

13 The value of 9307 x 937 – 9307 x 837 is **930700**

14 1 kilogram is **1000000 mg**

15 The product of the place values of two 5's in 75352 is **250000**

16 The Roman numeral of 99 is **X C IX**

17 If x ÷ a = x, then a is **1**

18 The predecessor of 700,800 is **7,00,799**

19 In which of the following expressions, prime factorization has been done? **168 = 2×2×2×3×7**

20 The number 75847 rounded to the nearest hundred is **75800**

21 650 = **28** × 23 + 6

22 The Hindu-Arabic numeral for the Roman numeral CCCXL is **340**

23 The estimated quotient 2649 ÷ 134 by rounding off both the numerator and the denominator to the nearest hundred is **26**

24 The largest four digit number x smallest two digit number is **99990**

25 What must be added to 34,52,629 to make it equal to 6 crore? **5,65,47,371**

1. WHOLE NUMBERS

1. Smallest whole number is
   a) 1
   b) 0
   c) Not determinable
   d) None of these.

2. Subtraction of whole number is
   a) closed
   b) associative
   c) commutative
   d) none of these

3. Additive identity of whole number is
   a) 1
   b) 2
   c) 0
   d) -1

4. The value of 12 ÷0 is
   a) 1
   b) 12
   c) 0
   d) None of these

5. The value of 390×4+6×390 is
   a) 1320
   b) 3092
   c) 3900
   d) 3120

6. Geetha has 7 notes each of Rs 10 and Gautham has 12 notes each of Rs 10. How much money do they both have in all?
   a) 70
   b) 120
   c) 190
   d) 100

7. Your father decided to give you a gift worth Rs 25000 on your birthday. Out of this, he brought a bicycle for Rs 1500 and a music system for Rs 8500. The rest he gifted to you in the form of a 'Kisan Vikas Patra'. What is the value of 'Kisan Vikas Patra' gifted to you?
   a) 10000
   b) 15000
   c) 17500
   d) None of these

8. How many times the digit 5 occurs in the units place in all natural numbers up to 100?
   a) 11
   b) 10
   c) 9
   d) None of these

9. Write two consecutive successors of 909.
   a) 910, 911

b) 907, 908
c) 909, 910
d) None of these

10. What is the minimum and maximum no. of digits in the sum if we add any two "three digit numbers"?
a) 4, 5
b) 3, 5
c) 3, 4
d) None of these

11. Find the difference between the smallest 4 digit number and largest 3 digit number.
a) 900
b) 2
c) 1
d) 901

12. What is the largest 4 digit number divisible by 13?
a) 9999
b) 9997
c) 9986
d) None f these.

13. What is the least number that must be added to 2345 to make it exactly divisible by 3?
a) 2
b) 1
c) 0
d) None of these.

14. The difference between 895 and the number obtained by reversing the digit is
a) 792
b) 927
c) 397
d) 297

15. Division is the inverse of
a) addition
b) subtraction
c) multiplication
d) none of these

16. There are ____ whole number up to 60
a) 59
b) 60
c) 61
d) None of these

17. The natural number whose predecessor does not exist is
a) 0
b) 1
c) 2
d) None of these

18. $(7\times8)\times5=7\times(8\times5)$ This statement shows that multiplication of whole number is
a) closed
b) associative
c) commutative
d) none of these

19. When a whole is divided by ____ the quotient is the number itself.

a) 0
b) 1
c) 2
d) None of these

20. Divide the largest 4 digit number by the largest 2 digit number and write down the quotient.
a) 101
b) 100
c) 10
d) 11

21. The cost of 1 pencil box is Rs. 26. How many pencil boxes can be bought for Rs 312.
a) 11
b) 12
c) 10
d) None of these.

22. The least no. which when divided by 6, 8, 9 leaves the remainder 5.
a) 79
b) 27
c) 72
d) 77

23. On dividing 92,197 by certain number, the quotient is 2634 and the remainder is 7. Find the divisor?
a) 35
b) 36
c) 34
d) None of these

24. 125 ×215 - 125×15 = _____ .
a) 28750
b) 26750
c) 25000
d) 21500

25. There are 89 students in a class, out of which 26 play cricket, 10 play hockey and the rest do not play anything. How many students are there who do not play any of the games?
a) 36
b) 53
c) 46
d) 43

Answers

1)b 2)d 3)c 4)d 5)c 6)c 7)b 8)b 9)a 10) c 11)c 12)b 13)b 14)d 15)c
16)c 17)b 18)b 19)b 20)a 21)b 22)d 23)a 24)c 25)b

2. PLAYING WITH NUMBERS

1 How many prime numbers are there between 1 and 50?
a) 14 b) 15 c) 16 d) 17

2 Smallest odd Composite number is,
a) 5 b) 21 c) 9 d) 15

3 Write the Smallest number in the blank so that the resulting number is divisible by 9. 725 26
a) 3 b) 4 c) 5 d) 7

4 The Prime factorisation of largest 3-digit number is
a) 3X3X37X3 b) 3X9X37 c) 37X27 d)None.

5 The Prime factorisation of difference between the Smallest three digit number abd the Smallest natural number is,
a) 3X33 b) 9X11 c) 3X3X11 d) None.

6 H.C.F of two Co-prime numbers is,
a) One of the number b) 1 c) 0 d) None.

7 Which of the following pairs is a pair of Co-primes.
a) 5,25 b) 12,48 c) 9,72 d) 5,9

8 Which of the following is Prime number.
a) 57 b) 193 c) 111 d) 169

9 The number which is divisible by 9 is,
a) 2032 b) 5886 c) 3206 d) 6032

10 The largest 4-digit number which is exactly divisibleby 4 is,
a) 9996 b) 9998 c) 9994 d) None.

11 H.C.F of 12 and 40 is_____.
a) 2 b) 6 c) 4 d) 8

12 Sum of all prime numbers between 1 and 15 is,
a) 41 b) 42 c) 50 d) 51

13 The number which is divisible by 11 is,
a) 96251 b) 60392 c) 71753 d) None.

14 The Smallest digit number divisible by 11 ending in 5 is,

a) 1155 b) 1065 c) 1035 d) 1045

15 Greatest two digit prime number is,
a) 97 b) 99 c) 95 d) 91

16 Which of the following is a perfect number?
a) 24 b) 28 c) 10 d) 15

17 The Smallest number having 3 different prime factors is,
a) 30 b) 12 c) 18 d) 42

18 H.C.F of two Consecutive even numbers is_____
a) 1 b) 2 c) 0 d) None.

19 L.C.M of 6,8,45 is,
a) 316 b) 360 c) 180 d) 1080

20 The greatest 2-digit prime number less than 95 is,
a) 93 b) 91 c) 89 d) 95

21 L.C.M of 15 and 4 is,
a) 60 b) 30 c) 15 d) 45

22 The Smallest even prime number is,
a) 0 b) 4 c) 2 d) 6

23 The pair of primes having only one composite number between them are called_____.
a) Co-Prime b) Perfect numbers c) Twin primes d) Composite numbers

24 Which of the following pairs is a pair of twin prime.
a) (45,47) b) (41,43) c) (49,51) d) (91,93)

25 The greatest 2 digit number which is exactly divisible by 4 and 6 is,
a) 98 b) 94 c) 96 d) 90.

ANSWER KEY:

1)b 2)c 3)c 4)a 5)c 6)b 7)d 8)b 9)b 10)a 11)c 12)a 13)c 14)d 15)a
16)b 17)a 18)b 19)b 20)c 21)a 22)c 23)c 24)b 25)c

3.MENSURATION

1. The area of a square with perimeter 20cm is,
   a)36cm^2 b)16cm^2 c)25cm^2 d)9cm^2
2. The length of a rectangle whose breadth measures 8m and has an area of 96 square meter is,
   a) 14m b)12m c)16m d)10m

3. The side of an equilateral triangle with perimeter 45 cm is,
   a)9cm b)5cm c) 10cm d)15cm

4. The side of a square whose area is 400 square meter is,
   a) 200m b)100 m c) 20m d) 25m

5. The breadth of a rectangle with length 12cm and perimeter 36cm is,
   a)3cm b)6cm c)9cm d)24cm
6. Area of rectangle of length '*l*' units and breadth twice its length is,
   a) $2l$ b)$2l^2$ c)$4l$ d)$3l^2$

7. The perimeter of an isosceles triangle is 42cm. The unequal side is 12cm. The length of each equal side is ,
   a)1ocm b)15cm c)30cm d)14cm

8. The perimeter of rectangle whose length is 16m and breadth is half of its length is,
   a)128m b)24m c)64m d)48m

9. The perimeter of a square of area 1600cm^2 is,
   a) 160cm b) 400cm c) 116cm d) 80cm

10. The length of the rectangular hall is 4m less than 3 times the breadth of the hall. If the breadth of the hall is 9m then its area is,
   a) 63 sqm b) 207 sqm c) 48 sqm d)117 sqm

11. The perimeter of regular pentagon is 60cm . The length of one side is,
   a) 10cm b) 6cm c) 12cm d) 15cm

12. A piece of string is 102cm long. What will be the length of each side if the string is used to form a regular hexagon,
   a) 17cm b) 34cm c) 51cm d) 10.2cm

13. The area of a rectangular piece of cardboard is 75sq.cm and its length is 15 cm. What is its perimeter?
   a) 20cm b) 40cm c) 10cm d)30cm

14. How many tiles with dimensions 4cm and 10cm will be needed to fit in a region whose length and breadth are 84cm and 60cm respectively,
   a)106 b) 116 c)126 d)156
15. How much distance will Anu cover in going around a rtangular field once whose area is 576 sqm and breadth 16m,
   a) 104m b) 52m c) 36m d) 124m
16. The cost of fencing a square park 600m long at the rate of Rs. 12 per meter is,
a) Rs. 2400 b) Rs. 28800 c) Rs 24800 d) Rs. 26800

17. The area of rectangle whose length 1m and breadth 60cm is,

a) 60 sq.m b) 60 sq.cm c) 0.6 sq.m d) 600 sq.cm

18. To put lace around a saree we need its
a) perimeter b) area c) both d) none

19. To calculate side of a square when perimeter is given, we divide perimeter by
a) 2 b) 4 c) 6 d) 8

20. Area of rectangle whose breadth is 7m and whose length is 5m more than its breadth is,
a) 84 sq.m b) 35 sq.m c) 14 sq.m d) 42 sq.m

21. If perimeter of a square is doubled then new area of the square so formed is,
a) Remains the same b) becomes three times c) becomes nine times

d) none

22. If each side of a square is trebled then the ratio between the original and new area is,
a) 1:9 b) 9:1 c) 1:3 d) none
23. The length and breadth of a rectangle is 14m and 9m respectively. Its area is,
a) 126 sq.m b) 56 sq.m c) 23 sq.m d) none
24. The perimeter of regular decagon with each side measuring 13m is,
a) 65m b) 104 m c) 130 m d) 91m

25. The perimeter of an equilateral triangle of side 17 m is,
a) 41 m b) 51 m c) 31 m d) 71m

ANSWER KEY FOR MENSURATIONS:

1)C 2)B 3)D 4)C 5)B 6)B 7)B 8)D 9)A 10)B 11)C 12)A 13)B 14)C 15)A 16)B 17)C 18) A 19)B 20)A 21)D 22)A 23)A 24)C 25)B

4. INTEGERS

CHOOSE THE CORRECT ANSWERS :-

1. What integer should be added to – 25 to get zero ?
   a) 0 b) +25 c) -1 d) none of these

2. What is the predecessor of -3?
   a) +3 b) - 2 c) -4 d) +4

3. What is the successor of -7 ?
   a) -6 b)-8 c) +6 d) +8

4. The integer _____ is neither positive nor negative
   a) 1 b) 0 c) -1 d) none of these

5. A diver is 20m below sea level . His position is given as -20m.Give his new position as an integer , if he goes further down by 10m.
   a) +10m b) -10m c) -30m d) +20m

6. A diver is 20m below sea level . His position is given as -20m.Give his new position as an integer , if he comes up by 10m.
   a) +10m b) -30m c) +20m d) -10m

7. The value of -16 + 18 -25 + 20 = _____
   a) -3 b) +3 c) + 5 d) -79

8. A point B on the top of the mountain is 4500m above sea level and a point A is 3000m below the sea level . The vertical distance between points A and B is
   a) 1500m b) 7500m c) 45000m d) 3000m

9. The smallest positive integer is
   a) 0 b) +1 c) not determinable d) none of these

10. The greatest negative integer is
    a) -1 b) 0 c) not determinable d) none of these

11. The integer 4 more than -6 is
    a) 10 b) -2 c) +2 d) -10

12. The opposite of -4 is
    a) +4 b) +16 c) -16 d) -4

13. What must be added to -135 to get -142
    a) +7 b) + 277 c) -7 d) -277

14. Every negative integer is less than
    a) -1 b) -2 c) 0 d) none of these

15. Zero is
    a) a positive integer b) a negative integer c) neither positive nor negative d) none of these.

16. The sum of greatest positive integer and smallest negative integer is
a) +1 b) 0 c) -1 d) none of these

17. Smallest negative integer is
a) 0 b) -1 c) not determinable d) none of these

18. Greatest positive integer is
a) 0 b) +1 c) not determinable d) none of these

19. How many integers lie between -2 and +5 ?
a) 5 b) 6 c) 7 d) 3

20. The integer 3 less than -12 is
a) -15 b) +15 c) +9 d) -9

21. What should be subtracted from 4 to get -9 ?
a) -13 b) +5 c) +13 d)-4

22. The integer -5 less than 9 is
a) -4 b) +14 c) +4 d) -14

23. - 7 lies to the left of
a) -10 b) -8 c) -13 d) 0

24. + 20 lies to the right of

a) +5 b) +25 c) +30 d) none of these

25. The absolute value of – 23 is
a) -23 b) 23 c) 0 d) none of these

26. The absolute of an integer is
a) always positive b) always negative c) 0 d) none of these

ANSWER KEY FOR INTEGERS

1)b 2)c 3)a 4)b 5)c 6)d 7)a 8)b 9)b 10)a 11)b 12)a 13)c 14)c 15)c 16)b 17)c 18)c 19)b 20)a 21)c 22)b 23)d 24)a 25)b 26)a

5.ALGEBRA

1. Which of the following is an algebraic expression.
   (a) $10 \div 2 + 3$ (b) $2x + y = 5$ (c) $15 - 7 = 8$ (d) $(5/8) - 2$
2. Sum of 5x and 4y is

   (a) $5 + x + 4 + y$ (b) $5x + 4 + y$ (c) $9xy$ (d) $5x + 4y$

3. Commutative property of addition using the variables x and y is

   (a) $x + y = y + x$ (b) $xy = yx$ (c) $x + y = y + x$ (d) $x + y = x - y$

4. 3 less than the sum of a and b is

   (a) $3 - (a + b)$ (b) $(a + b) - 3$ (c) $3 + (a + b)$ (d) $(a + b) + 3$

5. 8ab -5cd is a

   (a) monomial (b) binomial (c) trinomial (d) none

6. Perimeter of a triangle with sides p,q and r is.

   (a) pqr (b) 3pqr (c) $3 \times (p + q + r)$ (d) $p + q + r$

7. If Anil's present age is y years, then his age before 3 years

   (a) (y - 3) years (b) (3 - y) years (c) (y + 3) years (d) 3y years

8. Cost of one pen is Rs.x and cost of one pencil Rs.y, then cost of 10 pens and 4 pencils is

   (a) $14(x + y)$ (b) $10x + 4y$ (c) $4x + 10y$ (d) $(10 + 4)(x + y)$

9. Solution of x in the equation $x + 7 = 15$ is

   (a) -8 (b) 22 (c) 8 (d) -22

10. Amit earns Rs.x in a month and spends Rs.y in every month..His income for ayear

    (a) $12x + y$ (b) $12(x - y)$ (c) $12x - 12y$ (d) $12(x + y)$

11. Speed of a car is 60km/hr. Distance car covered in x hours

    (a) $(60 \div x)$ km/hr (b)60x km/hr (c) $(60 + x)$ km/hr (d) $(x \div 60)$ km/hr

12. Which of the following equation satisfies $x = 3$

    (a) $3x = 0$ (b) $3 + x = 0$ (c) $3x = 9$ (d) $9x = 3$

13. n increased 2 times m is written as

(a) $2m + n$ (b) 2mn (c) $2n + m$ (d) $2(m + n)$

14. The value of a in the equation $8a - 3 = 5$

(a) 8 (b) 3 (c) 1 (d) 5

15. You have thought of a number x, then twice the number you thought of subtracted by 3 is.

(a) $2 - 3x$ (b) $2 (x - 3)$ (c) $2x - 3$ (d) $3 - 2x$

16. If side of a square is y, then its area.

(a) $4y$ (b) $y \times y$ (c) $4 + y$ (d) $y \div 4$

17. Age of Sonu's father is thrice his age. Father's age after five years is

(a) $3x$ (b) $3x - 5$ (c) $3 \times 5 \times x$ (d) $3x + 5$

18. If n students are sitting in a row. Number of students sitting in m rows

(a) mn (b) $m + n$ (c) $m - n$ (d) $m \div n$

19. Which of the following value makes the equation $6s - 12 = 3s$, is correct

(a) -4 (b) 6 (c) -6 (d) 4

20. If r is the radius and d is the diameter of a circle, then the relation between them

(a) $r = 2d$ (b) $d = 2r$ (c) $r \div 2 = d$ (d) $dr = 2$

21. Which of the following equation is correct

(a) $(x + y) z = x (y + z)$ (b) $x (y + z) = xy + xz$ (c) $(x + y) + z = (x \times y) z$ (d) $x - y + y = y - x + x$

22. Five times of the sum of 3x and 4y

(a) $5 \times 3x \times 4y$ (b) $5 + (3x \times 4y)$ (c) $5 (3x + 4y)$ (d) $5 + (3x + 4y)$

23. Product of 7p and 2q added to the quotient of $3p \div 5q$ is

(a) $(7p \times 2q) + (3p \div 5q)$ (b) $(7p + 2q) \times (3p \div 5q)$ (c) $(7p + 2q) + (3p \times 5q)$ (d) $(7p \times 2q) \div (3p \div 5q)$

24. Which of the following is an algebraic equation

(a) $5x + 3 < 9$ (b) $5x + 3 + 8$ (c) $5x + 3 = 8$ (d) $5 + 3 = 8$

25. Constant in the expression $10x + 5y - 6z + 7$ is

(a) 10 (b) 5 (c) -6 (d) 7

Answer key for algebra

1(b) 2(d) 3(a) 4(b) 5(b) 6(d) 7(a) 8(b) 9(c) 10(d) 11(b) 12(d) 13(a) 14(c) 15(c) 16(b) 17(d) 18(a) 19(d) 20(b) 21(b) 22(c) 23(a) 24(c) 25(d).

6. Ratio and Proportion

Answer as directed.
(Choose the correct answer from the bracket.)

Q.1. The ratio of any two numbers has
a) No unit b)One unit c) Two units d) Three units

Q.2. In a ratio, the first term is also called
a) Consequent b) Mean c) Extreme d) Antecedent

Q.3. In a proportion, which of the following of the means and extremes is / are equal
a) Sum b) Difference c) Product d) Sum as well as product

Q .4. The ratio of 8 hours to 2 days is
a) 4 : 1 b) 6 : 1 c) 1: 4 d) 1: 6

Q. 5. In a class of 60 students, there are 40 boys. Find the ratio of girls to the total number of students.
a) 1:3 b) 3:1 c) 2: 8 d) 4:1

Q. 6 The ratio of 90 cm to 1.5 m is

a) 5:3 b) 3:5 c) 1: 9 d) 9:1

Q. 7 Rs. 800,when divided in the ratio of 3:5 is

a)Rs. 300, Rs. 600 b) Rs. 400, Rs 400 c) Rs600 , Rs. 200 d) Rs. 300, Rs, 500

Q. 8 If the cost of 1 dozen pencil is Rs. 60 then the cost of 4 pencils is

a)Rs. 40 b) Rs. 30 c) Rs. 20 d) Rs. 10

Q. 9 Ratio of 3 : 4 is same as

a) 4:3 b) 6: 8 c) 8:6 d) 1: 4

Q. 10 Ratio of 1 dozen to 1 score is

a) 3:5 b) 5:3 c) 12 : 24 d) 24: 20

Q. 11 Which of the following are in proportion?

a) 10,12, 6, 5 b) 6, 10, 12, 5 c) 5, 6, 10, 12 d) 5, 6, 12, 10

Q. 12 If a distance travelled by a car is 3 in hrs is 120 kms then the distance travelled by the car in 5 hrs is

a) 200km b) 160 km c) 100km d) 150 km

Q. 13 The ratio equivalent to 18: 12 is

a) 2: 3 b) 3 : 2 c) 5 : 1 d) 1 ; 5

(Find the missing numeral for the following proportions Q. 14 to Q. 18 – 4 Questions)

Q. 14 3 : 7 :: 15 : _____

a) 3 b) 5 c) 35 d) 21

Q. 15 8:5 :: _____: 10

a) 16 b) 2 c) 50 d) 80

Q. 16 _____: 100 : : 21 : 30

a) 3000 b) 2100 c) 70 d) 630

Q. 17 _____: 15 :: 55: 75

a) 55 b) 5 c) 11 d) 75

Q. 18 11: _____:: 55 : 60

a) 5 b) 12 c) 10 d) 15

Solve the following and choose correct answer

Q.19 Find the ratio of Ram's age that of his father's if Ram is 10 year old and his father is 44 year old.

a) 2: 22 b) 5: 22 c) 22: 5 d) 22:2

Q. 20 The ratio of number of boys to the girls in a class if there are 26 girls and 14 boys .

a) 7 : 13 b) 13 : 7 c) 4 : 10 d) 10 : 4

Q. 21 What is the Income to expenditure ratio of Ravi if they are Rs. 48,000 and Rs. 24,000 respectively.

a) 2: 1 b) 1: 2 c) 6: 3 d) 4: 6

Q. 22 The Ratio of apples to total fruits with Reshma if she has half a dozen of bananas and 24 apples.

a) 24 : 12 b) 12 : 24 c) 6: 24 d) 1: 4

Q. 23 Find the number of bananas can be purchased for Rs. 12.50 if cost of 4 dozen bananas is Rs. 60?

a) 10 b) 12 c) 5 d) 13

Q. 24 If 6 oil tankers can be filled by a pipe in 4 ½ hours. How much will it take for the same pipe to fill 4 such oil tankers?

a) 5 hrs b) 3 hrs c) 2 d) 4 hrs

Q. 25 Ratio of the length of the school ground to its breadth is 3 :2.
Find the breadth if the length is 54 m.

a) 27 b) 81 c) 162 d) 6

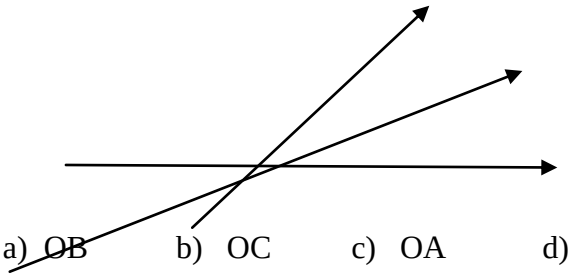
ANSWERS:

1)B 2)D 3)C 4)D 5)A 6)B 7)D 8)C 9)B 10)A 11)C 12)A 13)B 14)C 15)A 16)C 17)B 18)B 19)B 20)A 21)A 22)D 23)A 24)B 25)B

7. PRACTICAL GEOMETRY

1.Two line segments are said to be perpendicular if they intersect such that the angles formed between them are _____

a) Obtuse angle b) Acute angle c) Right angle d)Straight angle

2.  _____ is known as the Line if symmetry and the angle Bisector of AOB

a) OB b) OC c) OA d) OD

3. To construct a 15 angle we have to construct an angle bisector of _____

a) 45 b) 60 c) 90 d) 30

4. Every point on the boundary of a _____ is at an equal distance from its centre .

a) Rectangle b) circle c) square d) polygon

5.How many number of circles can be drawn through one give point P?

a) Infinite b) one c) Two d) four

6. A semi circular device graduated into 180 degree parts which is used to draw and measure angle.

a) Set -squares b) Compasses c) Divider d) Protractor

7. The line segment joining centre to the any point on the circle is called its _____

a) Angle b) Radius c) Chord d) Arc

8. Given AB = 3.4 cm and CD = 6.3 cm .If XY = AB + CD .Find XY

a) 6.4 b) 7.9 c) 9.7 d) 7.7

9. When two rays are drawn from a single point we form an _____

a) Angle b) Line segment c) Perpendicular Lines d) Sector

10. Using ruler and compasses we can construct an angle if its _____ is given

a) Radius b) Length c) Measures d) Lines

11. RS is a line bisector meeting PQ at O.If PQ = 11.8 .What is the measure of OQ?

a) 6.4 b) 7.9 c) 9.7 d) 7.7

12._____ divides the circular region into halves.

a) Diameter b) Chord c) Radius d) Sector

13.If AB = 2.8 cm and CD = 3.5 .Find 2AB – CD.

a) 1.2 b) 3.1 c) 2.1 d) 1.3

14.Name the angle formed by the hands of a clock when it is at 4 o'clock.

a) Acute b) Obtuse c) Right d) straight

15. A _____ Bisector divides a give Line segment into two halves.

a) Parallel b) Perpendicular c) Congruent d) Transversal

ANSWERS

1) c 2)b 3)d 4) b 5)a 6)d 7)b 8)c 9)a 10)c 11)d 12)a 13)c 14)b 15)b

8. DECIMALS

1. The place value of 5 in 27.354

   (a)tenths (b) hundredths (c) hundreds (d) tens

2. Decimal fraction of 0.02

   (a) 2/100 (b) 2/10 (c) 0.2/10 (d) 0.02/100

3. Decimal number of 834/1000

   (a) 83.4 (b) 834.0 (c) 8.34 (d) 0.834

4. 4 hundreds, 6 tenths is written as

   (a) 4.6 (b) 400.6 (c) 40.6 (d) 400.06

5. 3.7 lies between the whole numbers

   (a) 3 and 4 (b) 2 and 3 (c) 3 and 7 (d) 4 and 7

6. Rupees 25 and 8 paise cab be expressed as

   (a) Rs 25.8 (b) Rs 258 (c) Rs 25.08 (d) Rs 25.80

7. 11/5 can be expressed as

   (a) 1.1 (b) 0.22 (c) 0.11 (d) 2.2

8. Decimal number of 700 + 6 + 2/100 + 3/1000

   (a) 706.023 (b) 706.23 (c) 706.203 (d) 760.023

9. 5 mm = ---------- cm

   (a) 50 (b) 0.05 (c) 0.5 (d) 500

10. $62\frac{9}{100}$ in decimal is written as

    (a) 62.9 (b) 62.09 (c) 62.009 (d) 629.0

11. Lowest form of decimal 4.25

    (a) 400/25 (b) 17/4 (c) 4/25 (d) 4/17

12. Expanded form of 0.63

    (a) 60 +3 (b) 0 + 6/100 + 3/10 (c) 6/100 + 3/1000 (d) 6/10 + 3/100

13. Sum of 19.087 and 4.05

    (a) 23.875 (b) 23.092 (c) 23.137 (d) 23.587

14. 8012 gm is expressed as

(a) 8.012 kg (b) 801.2 kg (c) 80.12 kg (d) 0.8012 kg

15. 32.056 and 17.56 are

(a) like decimals (b) unlike decimals (c) equal decimals (d) none of these

16. 1 cm = ---------- km

(a) 0.00001 (b) 0.000001 (c) 0.0001 (d) 0.001

17. 6000 g + 354 g = ---------- kg

(a) 6000.354 (b) 600.354 (c) 6.354 (d) 6354

18. Difference of 109.05 and 99.95

(a) 10.5 (b) 19.05 (c) 19.0 (d) 9.10

19. Number should be added to 26.83 to get 32.17 is

(a) 59.00 (b) 6.66 (c) 5.34 (d) 5.76

20. 24.073 ---------- 24.73

(a) > (b) < (c) = (d) none of these

21. 4.207 litre is expressed as

(a) 4 ltr.27 ml (b) 42 ltr. 7 ml (c) 420 ltr. 7 ml (d) 4 ltr. 207 ml

22. Tenths place digit in the decimal number 376.2948

(a) 2 (b) 9 (c) 4 (d) 7

23. Fractional form of the decimal number 5.006 is

(a) 5006/10 (b) 5006/100 (c) 5006/1000 (d) 5006/10000

24. 3 paise = Rs ----------

(a) 0.3 (b) 0.03 (c) 0.003 (d) 0.0003

25. 12.053 + 8.95 - 4.75 = ----------

(a) 16.398 (b) 16.053 (c) 16.253 (d) 16.503

Answers

1(b) 2(a) 3(d) 4(b) 5(a) 6(c) 7(d) 8(a) 9(c) 10(b) 11(b) 12(d) 13(c) 14(a) 15(b) 16(a) 17(c) 18(d) 19(c) 20(b) 21(d) 22(a) 23(c) 24(b) 25(c).