



**Bighelp**  
for education

A Catalyst For Better Education In India

# Bighelp For Education

Math Bee Contest - 2018

Level-5 (5<sup>th</sup>& 6<sup>th</sup> grade)

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## Score Card

Name of the student : \_\_\_\_\_

Parent's cell phone# : \_\_\_\_\_

Student Grade : \_\_\_\_\_

### **For the use of Math bee coordinator ONLY:**

Section A&B Score : \_\_\_\_\_

Section C Score : \_\_\_\_\_

Total Score : \_\_\_\_\_

**Section-A: (15 questions –Multiple Choice)**

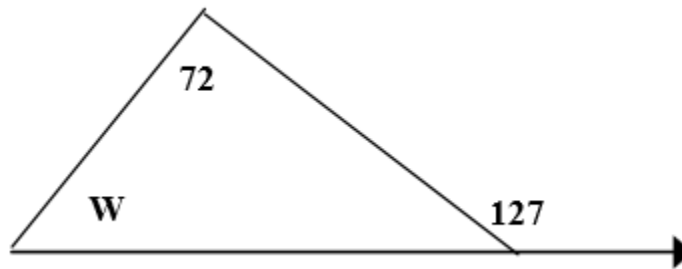
Circle the correct answers for the following questions 1 - 15:

1) Which of the following condition does the number line satisfy?



- A)  $A = B$                       B)  $A < B$                       C)  $A > B$                       D) None

2) In the figure below, What is the value of the angle W ?



- A) 45                                  B) 65                                  C) 180                                  D) 55

3) The ratio of A:B is 5:3 and B:C is 4:3. What is the ratio of A:B:C?

- A) 5:3:3                                  B) 5:4:3                                  C) 20:9:12                                  D) 20:12:9

4) What is the total number factors of the number 1000? (Including 1 and itself)

- A) 16                                  B) 14                                  C) 12                                  D) 15

5) What is the value of 20% of 25% of 50% of \$4800?

- A) \$40                      B) \$100                      C) \$60                      D) \$120

6) Find the sum of the first 60 positive integers below.

**1, 2, 3, 4, ... ,58, 59, 60**

- A) 1830                      B) 5050                      C) 1000                      D) 1800

7) If the ratio of A to B is  $\frac{3}{2}$  to  $\frac{5}{2}$  and the ratio of B to C is  $\frac{2}{3}$  to  $\frac{7}{3}$ , then find the ratio of A to B to C is ?

- A) 3:5:7                      B) 3:5:7                      C) 6:10:35                      D) 6:10:14

8) Devi had \$100 in her bank account. Her balance grew by 50%, then declined by 20%, then grew again by 10%. What is the final balance in Devi's account?

- A) \$132                      B) \$148                      C) \$120                      D) \$140

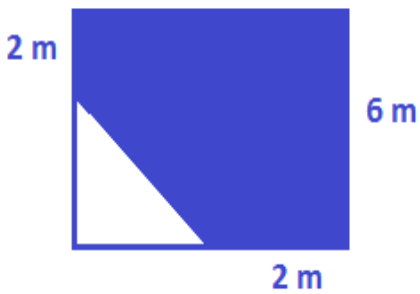
9) What is the value of the expression  $(6 \times 12 \times 18 \times 24) \div (3 \times 6 \times 9 \times 12) =$

- A) 16                      B) 8                      C) 32                      D) 1

10) Ayushi drives from 10 AM until 11:30 AM at a rate of 120 km per hour. Ayushi drove \_\_\_\_\_ Km in total.

- A) 120                      B) 150                      C) 180                      D) 210

11) What is the area of the shaded region of the square below? (Note: Figure is not drawn to the scale.)



- A) 36 sq. m                      B) 16 sq. m                      C) 20 sq. m                      D) 28 sq. m

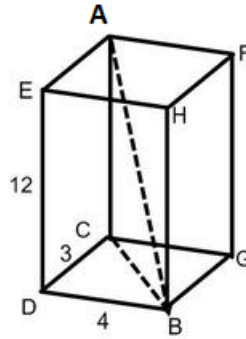
12) The sum of two consecutive odd numbers is 324. What is the largest of the two odd numbers.

- A) 151                      B) 153                      C) 161                      D) 163

13) Mike made 85% of the field goals he kicked for the for the football team. If he attempted 60 field goals, how many did he miss?

- A) 51                      B) 9                      C) 60                      D) 12

- 14) Find the length of the diagonal AB in the figure below.



- A) 14                      B) 15                      C) 19                      D) 13
- 15) If  $B * H = 2(4B + 3H)$ , then  $5 * 4 =$  \_\_\_\_\_ ?

- A) 32                      B) 64                      C) 100                      D) 20

**Section -B: ( 10 Questions - Fill in the blanks)**

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**Fill in the blank with the correct answerfor questions 16- 25**

16)Safa paid \$800 for a math bee kit, including a 5% sales tax, 12% shipping and 8% handling fee. How many dollars were the sales tax, shipping and handling fee altogether?

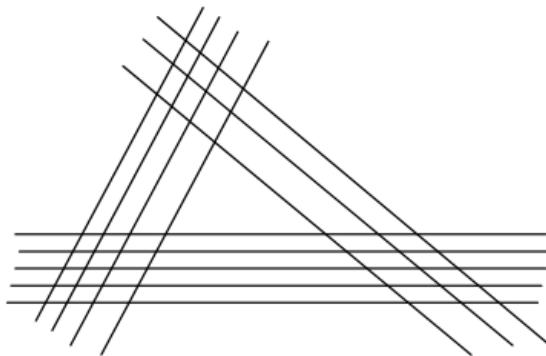
Answer : \$\_\_\_\_\_

17) Find the value of the expression below?

$$10 \cdot 3^2 - \frac{5^2 - 11}{7} + 18 \div 3 \cdot 2$$

Answer : \_\_\_\_\_

18)How many triangles are there in the below picture?

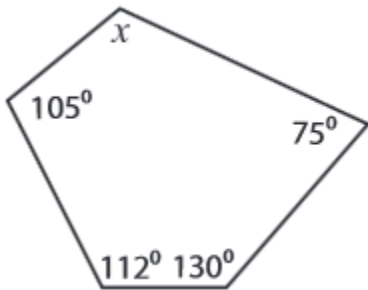


Answer : \_\_\_\_\_

19) Two standard six-sided dice are rolled. What is the probability that the sum of the numbers on the top faces of the dice is a prime number?

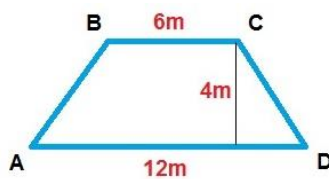
Answer : \_\_\_\_\_

20) What is the missing angle in the below diagram?



Answer : \_\_\_\_\_ degrees.

21) Find the area of the following trapezoid below?



Answer : \_\_\_\_\_ squaremeters

22) What is the 94<sup>th</sup> digit of the repeating decimal value of  $\frac{11}{13}$ ?

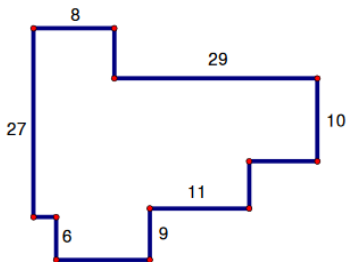
Answer : \_\_\_\_\_

23) Find the value of the following? [Write Answer in mixed fraction]

$$9 + \frac{9}{9 + \frac{9}{9 + \frac{9}{9}}}$$

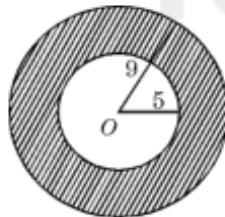
Answer : \_\_\_\_\_

24) The below diagram drawn as irregular shape, all angles are right angles. What is the perimeter of the irregular shape?



Answer: \_\_\_\_\_.

25) In the following diagram, two concentric circles have radii of 9 and 5, respectively. In terms of  $\pi$ , the area of shaded region is



Answer : \_\_\_\_\_



### Section-C :- (5 Questions)

**Solve the problems 26-30 & write the answer in the blank provided:**

- 26) A playground in the Shrewsbury middle school consists of a rectangle and two semi circles as shown below. How much fencing in yards needed to completely enclose the playground? [in terms of  $\pi$ ]



Answer : \_\_\_\_\_

- 27) Each shape in the picture below represents a number. Same shapes have the same number. If the triangle has a positive value, what number goes in the Hexagon?

$$\square \div 5 = \text{Hexagon}$$

$$12 + \triangle = \text{Circle}$$

$$3 \times \text{Circle} - \text{Pentagon} = \square$$

$$\triangle \times \triangle = 49$$

$$(-2)^3 = \text{Pentagon}$$

Answer: \_\_\_\_\_.

- 28) An interior angle of a regular polygon is five times as great as an exterior angle on the same regular polygon. How many sides does the polygon have?

Answer : \_\_\_\_\_ sides.

29) If seven horses drink 343 gallons of water in 7 days, how many gallons of water will 3 horses drink in 3 weeks?

Answer: \_\_\_\_\_ gallons.

30) If,

$$9900 = 2^a \cdot 3^b \cdot 5^c \cdot 7^d \cdot 11^e$$

Find the value of the  
 $a + b + c + d + e = ?$

Answer: \_\_\_\_\_

**Level 5 Answer Keys:**

<b>Number</b>	<b>Level 5 (grade 5 &amp;6)</b>
<b>1</b>	<b>B</b>
<b>2</b>	<b>D</b>
<b>3</b>	<b>D</b>
<b>4</b>	<b>A</b>
<b>5</b>	<b>D</b>
<b>6</b>	<b>A</b>
<b>7</b>	<b>C</b>
<b>8</b>	<b>A</b>
<b>9</b>	<b>A</b>
<b>10</b>	<b>C</b>
<b>11</b>	<b>D</b>
<b>12</b>	<b>D</b>
<b>13</b>	<b>B</b>
<b>14</b>	<b>D</b>
<b>15</b>	<b>B</b>
<b>16</b>	<b>\$160</b>
<b>17</b>	<b>100</b>
<b>18</b>	<b>60</b>
<b>19</b>	<b>FRACTION: 5/12</b>
<b>20</b>	<b>118</b>
<b>21</b>	<b>36</b>
<b>22</b>	<b>1</b>
<b>23</b>	<b>10-1/11 or 9 and 10/11</b>
<b>24</b>	<b>140</b>
<b>25</b>	<b>56 PI or 176</b>
<b>26</b>	<b>15PI+25</b>
<b>27</b>	<b>13</b>
<b>28</b>	<b>12</b>
<b>29</b>	<b>441</b>
<b>30</b>	<b>7</b>