|  |  |  | INDIAN SCHOOL AL WADI AL KABIR <br> Class IX, Mathematics Worksheet- HERON'S FORMULA 09-05-2021 |  |  |  |  |  |
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| OBJECTIVE TYPE (1 Mark) |  |  |  |  |  |  |  |  |
| Q.1. | Each of equal sides of isosceles right triangle is 20 cm . What is the semi perimeter of the triangle? |  |  |  |  |  |  |  |
|  | A | $20+10 \sqrt{3}$ | B | $20+\sqrt{2} \mathrm{~cm}$ | C | $20+10 \sqrt{2} c$ | D | $40+20 \sqrt{2} \mathrm{~cm}$ |
| Q.2. | The lengths of the three sides of a triangular field are $40 \mathrm{~m}, 24 \mathrm{~m}$ and 32 m respectively. The area of the triangle is |  |  |  |  |  |  |  |
|  | A | $378 m^{2}$ | B | $384 m^{2}$ | C | $789 \mathrm{~m}^{2}$ | D | $196 m^{2}$ |
| Q.3. | The base of a right triangle is 8 cm and hypotenuse are 17 cm . Its area will be |  |  |  |  |  |  |  |
|  | A | $60 \mathrm{~cm}^{2}$ | B | $40 \mathrm{~cm}^{2}$ | C | $48 \mathrm{~cm}^{2}$ | D | $80 \mathrm{~cm}^{2}$ |
| Q.4. | The length of the sides of a triangle are $4 \mathrm{~cm}, 6 \mathrm{~cm}$ and 8 cm . The length of perpendicular from the opposite vertex to the side whose length is 8 cm , is equal to |  |  |  |  |  |  |  |
|  | A | $\frac{3}{4} \sqrt{15} \mathrm{~cm}$ | B | $\frac{5}{4} \sqrt{15} \mathrm{~cm}$ | C | $\frac{3}{4} \sqrt{5} \mathrm{~cm}$ | D | $\frac{5}{4} \sqrt{3} \mathrm{~cm}$ |
| Q. | If the perimeter of an equilateral triangle is 90 m , then its area is |  |  |  |  |  |  |  |
|  | A | $15 \sqrt{3} \mathrm{~m}^{2}$ | B | $45 \sqrt{3} \mathrm{~m}^{2}$ | C | $225 \sqrt{3} \mathrm{~m}^{2}$ | D | $25 \sqrt{3} \mathrm{~m}^{2}$ |
| Q.6. | An isosceles right triangle has area $8 \mathrm{~cm}^{2}$. The length of its hypotenuse is |  |  |  |  |  |  |  |
|  | A | $4 \sqrt{2} \mathrm{~cm}$ | B | $\sqrt{48} \mathrm{~cm}$ | C | $2 \sqrt{2} \mathrm{~cm}$ | D | $\sqrt{6} \mathrm{~cm}$ |
| Q.7. | A student is given three sticks of length $6 \mathrm{~cm}, 5 \mathrm{~cm}, 3 \mathrm{~cm}$ respectively. His friend asked him to make a triangle with the help of these sticks and find its area. |  |  |  |  |  |  |  |
|  | A | $2 \sqrt{7} \mathrm{~cm}^{2}$ | B | $7 \sqrt{14} \mathrm{~cm}^{2}$ | C | $4 \sqrt{14} \mathrm{~cm}^{2}$ | D | $2 \sqrt{14} \mathrm{~cm}^{2}$ |
| Q.8. | If area of an equilateral triangle is $100 \sqrt{3} \mathrm{~cm}^{2}$ then perimeter of this triangle will be |  |  |  |  |  |  |  |
|  | A | 50 cm | B | 70 cm | C | 90 cm | D | 60 cm |

Q.9. The base and the corresponding altitude of a parallelogram are 10 cm and 3.5 cm , respectively. The area of the parallelogram is

|  | $\mathbf{A}$ | $70 \mathrm{~cm}^{2}$ | $\mathbf{B}$ | $0.35 \mathrm{~cm}^{2}$ | $\mathbf{C}$ | $35 \mathrm{~cm}^{2}$ | $\mathbf{D}$ | $3.5 \mathrm{~cm}^{2}$ |
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Q.10. Area of an equilateral triangle is always $\mathrm{a} / \mathrm{an}$.......... number [Given that length of each side is rational]

A \begin{tabular}{l|l|l|l|l|l|l|l}

Integer \& $\mathbf{B}$ \& | Not a real |
| :---: |
| number | \& $\mathbf{C}$ \& Rational \& $\mathbf{D}$ \& Irrational

\end{tabular}

Q.11. Area of a triangle with perimeter 42 cm and length of two sides 18 cm and 10 cm is given by
A
$21 \sqrt{11} \mathrm{~cm}^{2}$
B $\quad 21 \sqrt{13} \mathrm{~cm}^{2}$
C $\quad 7 \sqrt{13} \mathrm{~cm}^{2}$
D $7 \sqrt{11} \mathrm{~cm}^{2}$
Q.12. The area of an equilateral triangle is $3 \sqrt{3} \mathrm{~cm}^{2}$. The semi-perimeter of the triangle (in cm ) is
A
$4 \sqrt{3} \mathrm{~cm}$
B
$3 \sqrt{3} \mathrm{~cm}$

| $\mathbf{C}$ | $6 \sqrt{3} \mathrm{~cm}$ |
| :--- | :--- |

D $\quad 9 \sqrt{3} \mathrm{~cm}$
Q.13. Area of the triangle whose two sides are $8 \mathrm{~m}, 11 \mathrm{~m}$ respectively and perimeter are 32 m , is
A
$8 \sqrt{10} \mathrm{~m}^{2}$
B $8 \sqrt{5} \mathrm{~m}^{2}$
C $\quad 8 \sqrt{15} \mathrm{~m}^{2}$
D $8 \sqrt{30} \mathrm{~m}^{2}$
Q.14. The sides of a quadrilateral taken in order are $5 \mathrm{~m}, 12 \mathrm{~m}, 14 \mathrm{~m}$ and 15 m respectively. If the angle between the first two sides be $90^{\circ}$, its area is

|  | $\mathbf{A}$ | $114 \mathrm{~m}^{2}$ | $\mathbf{B}$ | $214 \mathrm{~m}^{2}$ | $\mathbf{C}$ | $144 \mathrm{~m}^{2}$ | $\mathbf{D}$ | $374 \mathrm{~m}^{2}$ |
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Q.15. In a triangle, the sides are $28 \mathrm{~cm}, 35 \mathrm{~cm}$ and 9 cm . Find the area of the triangle.
A $36 \sqrt{5} \mathrm{~cm}^{2}$
B $\quad 36 \sqrt{6} \mathrm{~cm}^{2}$
C $\quad 36 \sqrt{7} \mathrm{~cm}^{2}$
D $\quad 37 \sqrt{7} \mathrm{~cm}^{2}$

| Answers |  |  |  |  |  |  |  |  |
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| 』 <br>  <br>  <br> 3 <br> 4 <br> 4 | 1 | C | 2 | B | 3 | A | 4 | A |
|  | 5 | C | 6 | A | 7 | D | 8 | D |
|  | 9 | C | 10 | D | 11 | A | 12 | B |
|  | 13 | D | 14 | A | 15 | B |  |  |

