Department of Mathematics	Class IX

INDIAN SCHOOL AL WADI AL KABIR
Department of Mathematics
SUMMER HOLIDAY HOMEWORK (2022-23)

1 Mark Questions	
Q.1.	Rationalize the denominator of $\frac{6-4\sqrt{2}}{6+4\sqrt{2}}$
Q.2.	Simplify $125^{\frac{-1}{3}}\left(125^{\frac{1}{3}}-125^{\frac{2}{3}}\right)$
Q.3.	Find the perimeter of an equilateral triangle whose area is $16\sqrt{3}\ cm^2$.
Q.4.	Solve the equation $a-15=25$, and state which axiom did you use.
2 Mark Questions	
Q.5.	Write the decimal form of $\frac{14}{11}$ and state the kind of decimal expansion.
Q.6.	Express $18.\overline{48}$ in $\frac{p}{q}$ form.
Q.7.	Simplify $\left(5\sqrt{3}-2\sqrt{5}\right)^2$
Q.8.	Sides of a triangle are 70 cm, 80 cm, and 90 cm. Find its area. (Use $\sqrt{5}=2.23$)
3 Mark Questions	
Q.9.	Simplify $\sqrt{48}-\sqrt{72}-\sqrt{27}+2\sqrt{18}$
Q.10.	The sides of a triangular field are 41 m, 40 m, and 9 m. Find the number of rose buds that can be prepared in the field if each rose bed on an average need 900 cm^2 space.
Q.11.	If $x=2+\sqrt{3}$, find the value of $x^2+\frac{1}{x^2}$.
Q.12.	Find the area of the triangle whose sides are 42 cm, 34 cm and 20 cm in length. Hence find the height corresponding to the longest side.

4 marks questions	
Q.13.	If $\frac{3+\sqrt{2}}{3-\sqrt{2}} = a + b\sqrt{2}$, then, find the values of a and b.
Q14.	State any four Euclid's axioms.
Q.15.	Find the value of $\frac{4}{(216)^{\frac{-2}{3}}} + \frac{1}{(256)^{\frac{-3}{4}}} + \frac{2}{(243)^{\frac{-1}{5}}}$

Answers

Answers	**1.**	$17 - 12\sqrt{2}$	**2.**	-4	**3.**	24 cm	**4.**		**5.**	$1.\overline{27}$, non-terminating, recurring
	6.	$\frac{610}{33}$	**7.**	$5(19-4\sqrt{15})$	**8.**	$2676cm^2$	**9.**	$\sqrt{3}$	**10.**	2000
	11.	**14**	**12.**	$336cm^2$, $16cm$	**13.**	$a = \frac{11}{7}$, $b = \frac{6}{7}$	**14**		**15.**	214