

GS SAINT PHILIPPE NERI
ACADEMIC YAER 2025-2026
SECOND TERM
Holiday package

1. On the unit circle, what are the coordinates of the point corresponding to 60° ?
2. Determine whether " $x + 5 > 10$ " is a statement or a propositional function.
3. Define an Abelian group and give an example
4. State three properties of absolute value
5. Express the parametric equations $x = 2t + 1$,
 $y = t - 3$ in Cartesian form.
6. Determine the range of $f(x) = x^2 - 4$.
7. Maximize the area of a rectangle with perimeter 20.
8. Find the displacement, velocity and acceleration of moving object if the equation of the motion
 $s(t)$ is given by $t^3 - 6t^2 + 4t$ after 10 seconds.
9. Show that the vectors $(1,2)$ and $(2,-1)$ are orthogonal under the standard dot product and compute the angle between them.

END