

BHASVIC MaTHS

A2 Doubles assignment *summer 5*

Section: *FP1*

Past

1)

$(1, -2)$ and $(-1, 2)$

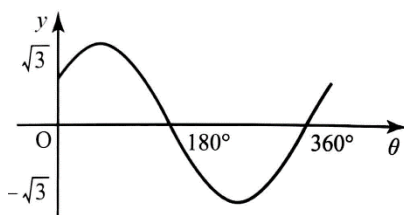
2)

(i) $\sqrt{3} \cos(\theta - 54.7^\circ)$

(ii) Max $\sqrt{3}$, $\theta = 54.7^\circ$;

min $-\sqrt{3}$, $\theta = 234.7^\circ$

(iii)



(iv) Max $\left(\frac{1}{3 - \sqrt{3}}\right)$,

$\theta = 234.7^\circ$; min

$\left(\frac{1}{3 + \sqrt{3}}\right)$, $\theta = 54.7^\circ$

3)

a $s = 6$

b AC: $\mathbf{r} = 2\mathbf{i} - 3\mathbf{j} + 5\mathbf{k}$

$+ s(2\mathbf{i} + 9\mathbf{j} - 3\mathbf{k})$

OB: $\mathbf{r} = t(6\mathbf{i} + 3\mathbf{j} + 7\mathbf{k})$

c $\frac{9}{47}$

4)

53°

Present

5)

i)

$$-6 < x < 2$$

ii)

$$x < -\frac{4}{5} \text{ or } x > 2$$

6)

$$x \leq 0 \text{ and } x \geq \frac{4}{5}$$

7)

$$\frac{5}{2} < x < 3 \text{ or } x > 4$$

8)

$$-2 < x < -1 \text{ or } x > 2$$

9)

$$x \leq \frac{1}{2}, \frac{3}{4} \leq x < 1 \text{ or } x > 1$$

10)

$$x \leq -5 \text{ or } x \geq 1$$

11) a) $-5 < x < -3$ b) $x > -2$

12)

$$\boxed{(-1, -1), \left(2, \frac{1}{2}\right)}, \boxed{-2 < x \leq -1 \cup 0 < x \leq 2}$$