Test

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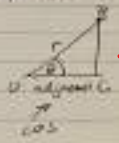
Name : Maanya
Start : 08:05
End : 08:50

Q1)

a) DC is the horizontal component



AG

b) $\frac{1}{2}(r\cos\theta)(r\sin\theta)$ M1A1

$\frac{1}{2}bh$

c) $\frac{1}{4}(r\cos\theta)(r\sin\theta) = \frac{3}{5}(\frac{1}{2}r^2\theta)$ M1A1

$\cos\theta\sin\theta = \frac{3}{5}\theta$

$\theta = 0$ ✗

$\theta = 0.630$ A1

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Q2)

a) $\cos 75° = q$

$\cos(-75°) = -q$ R1

$\cos(-75°) = \cos(105°)$

$\cos(105°) = -q$

1/1

b)

c)

d) N/A

Q3)

REDO

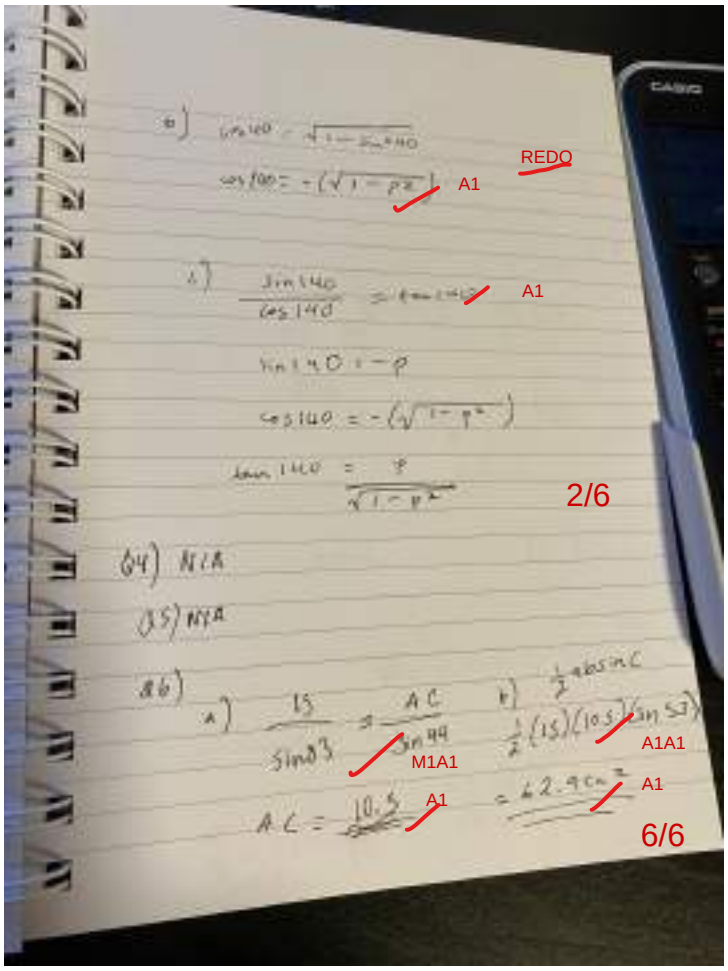
a) (i) $-p$ P

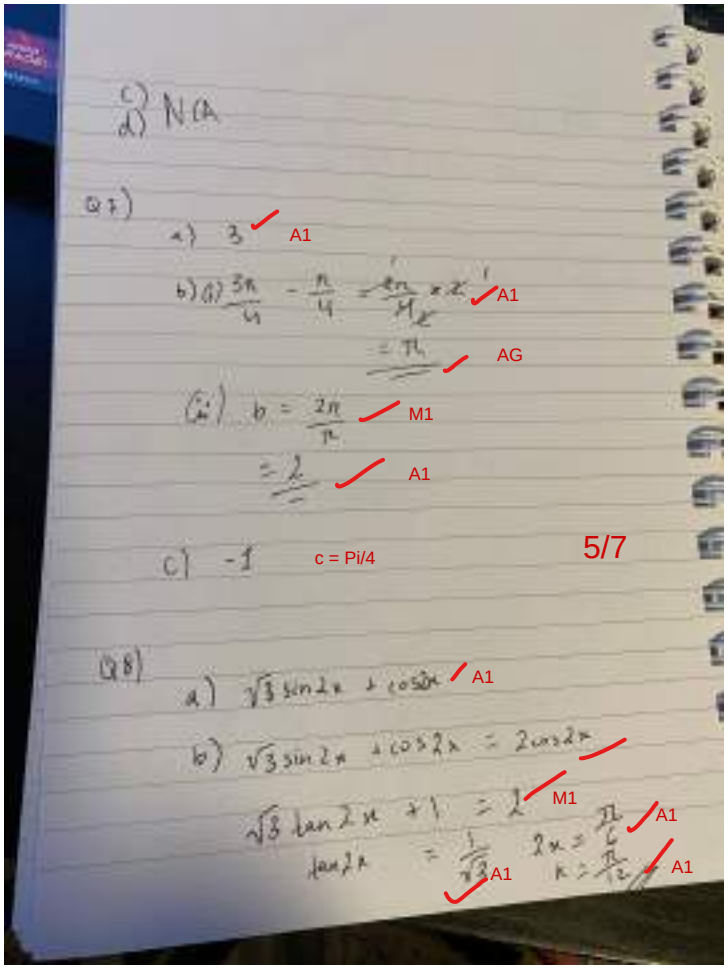
(ii) $\sin^2\theta + \cos^2\theta = 1$

$\sqrt{\cos^2\theta} = \sqrt{1 - \sin^2\theta}$

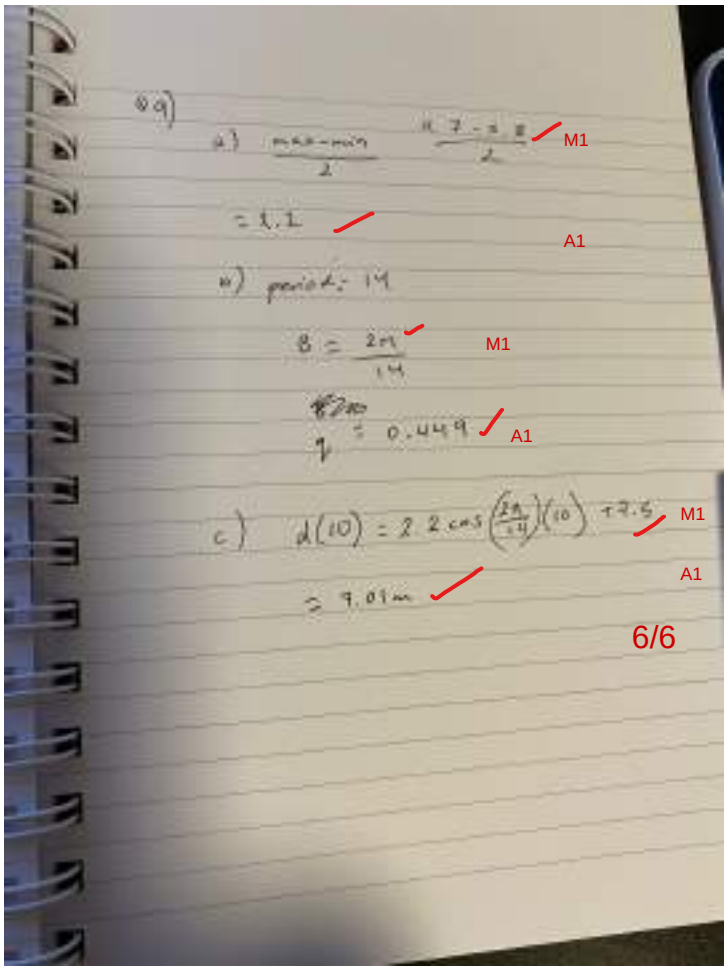
$\cos\theta = \sqrt{1 - \sin^2\theta}$

$\cos 75° = q = \sqrt{1 - p^2}$ - P


REDO
A1
A1
2/6
Q4) N/A
Q5) N/A
Q6)
M1A1
A1
A1A1
A1
6/6


c) N/A
d) N/A
Q7)
A1
A1
AG
M1
A1
5/7
c = Pi/4
Q8)
A1
M1
A1
A1
A1

5/7


9)
a) max-min / 2
= 1.1
M1
A1
b) period = 14
B = 2π / 14
M1
= 0.449
A1
c) d(10) = 2.2 cos((2π/14)(10)) + 7.5
M1
= 9.01m
A1
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