SA #02 Trigonometric Functions

Total points 5/5

Name *

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Section *

✓ *

1/1

If $\cos A = -\frac{24}{25}$ and $\cos B = \frac{3}{5}$, where $\pi < A < \frac{3\pi}{2}$ and $\frac{3\pi}{2} < B < 2\pi$, then the value of $\sin(A + B) =$_____.

- (✓) Option 1: $\frac{3}{5}$
- ( ) Option 2: $\frac{-3}{5}$
- ( ) Option 3: $\frac{4}{5}$
- ( ) Option 4: $\frac{-4}{5}$

✓ *

1/1

$\sin \frac{7\pi}{12} \cos \frac{\pi}{4} - \cos \frac{7\pi}{12} \sin \frac{\pi}{4} =$ --------

$\frac{1}{2}$

Option 1

$\frac{-1}{2}$

Option 2

$\frac{\sqrt{3}}{2}$

Option 3 ✓

$\frac{-\sqrt{3}}{2}$

Option 4

✓ *

1/1

If $\sin\theta = \frac{3}{5}$, $\tan\alpha = \frac{1}{2}$, $\frac{\pi}{2} < \theta < \pi < \alpha < \frac{3\pi}{2}$, then the value of $8\tan\theta - \sqrt{5}\sec\alpha$ = _____.

$\frac{5}{4}$

Option 1

$\frac{7}{2}$

Option 2

$\frac{-17}{2}$

Option 3

$\frac{-7}{2}$

Option 4 ✓

✓ *

1/1

$$\frac{\sin(\pi + x)\cos\left(\frac{\pi}{2} + x\right)\tan\left(\frac{3\pi}{2} - x\right)\cot(2\pi - x)}{\sin(2\pi - x)\cos(2\pi + x)\operatorname{cosec}(-x)\sin\left(\frac{3\pi}{2} - x\right)} = \text{_____}$$

0

-1

1 ✓

None of these

✓ * 1/1

$\tan\ (-225^\circ)\cot(-405^\circ) - \tan(-765^\circ)\cot(675^\circ) =$_____

1

-1

0 ✓

2