Congratulations! You passed!

Grade received 100% **Latest Submission Grade** 100% **To pass** 80% or higher

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1. In this assessment, you will be tested on all of the different topics you have in covered this module. Good luck! 1 / 1 point

What is the derivative of the function $f(x) = x^{3/2} + \pi x^2 + \sqrt{7}$ evaluated at the point $x = 2$?

- (●) $f'(2) = \frac{3\sqrt{2}}{2} + 4\pi$
- ( ) $f'(2) = \frac{3\sqrt{2}}{2} + 4\pi + \sqrt{7}$
- ( ) $f'(2) = \frac{3}{2} + 4\pi + \sqrt{7}$
- ( ) $f'(2) = \frac{3}{2} + 4\pi$

Correct
Well done!

2. What is the derivative of the function $f(x) = x^3 cos(x) e^x$? 1 / 1 point

- ( ) $f'(x) = -3x^2 sin(x) e^x$
- ( ) $f'(x) = -x^3 sin(x) + e^x x^3 + 3e^x x^2 cos(x)$
- (●) $f'(x) = -e^x x^3 sin(x) + e^x x^3 cos(x) + 3e^x x^2 cos(x)$
- ( ) $f'(x) = -e^x x^3 sin(x) + e^x x^3 cos(x) + e^x x^2 cos(x)$

Correct
Well done!

3. What is the derivative of the function $f(x) = e^{[(x+1)^2]}$? 1 / 1 point

- ( ) $f'(x) = e^{[(x+1)^2]}$
- ( ) $f'(x) = (x+1)e^{[(x+1)^2]}$
- (●) $f'(x) = 2(x+1)e^{[(x+1)^2]}$
- ( ) $f'(x) = e^{2(x+1)}$

Correct
Well done!

4. What is the derivative of the function $f(x) = x^2 cos(x^3)$? 1 / 1 point

- ( ) $f'(x) = 2x sin(x^3) - 3x^4 sin(x^3)$
- ( ) $f'(x) = 2x sin(x^3) - 3x^4 cos(x^3)$
- (●) $f'(x) = 2x cos(x^3) - 3x^4 sin(x^3)$
- ( ) $f'(x) = 2x cos(x^3) - 3x^4 cos(x^3)$

Correct
Well done!

5. What is the derivative of the function $f(x) = \sin(x) e^{\cos(x)}$ at the point $x = \pi$? 1 / 1 point

- ( ) $f'(\pi) = \frac{1}{e}$
- ( ) $f'(\pi) = \frac{1}{e^2}$
- ( ) $f'(\pi) = -\frac{1}{e^2}$
- (●) $f'(\pi) = -\frac{1}{e}$

Correct

Correct

Well done!