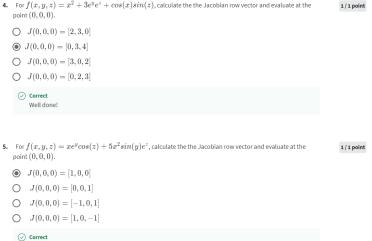
← Back Calculating the Jacobian Practice Quiz • 20 min • 5 total points Congratulations! You passed! Go to next item Grade received 100% To pass 80% or higher $\textbf{1.} \ \ \text{In this quiz you will put into practice how to calculate the Jacobian from the lecture video.}$ 1/1 point For $f(x,y)=x^2y+\frac{3}{4}xy+10$, calculate the Jacobian row vector J. $\bigcirc \ \ J = [2xy + \frac{3}{4}y + 10, x^2 + \frac{3}{4}x + 10]$ $\bigcirc \quad J = [xy + \frac{3}{4}y + 10, x^2 + \frac{3}{4}xy + 10]$ $\bigcirc \quad J = [xy + \tfrac34 y, x^2 + \tfrac34 xy]$ **⊘** Correct Well done! 2. For $f(x,y)=e^xcos(y)+xe^{3y}-2$, calculate the Jacobian row vector J . 1/1 point $\bigcirc \quad J = [e^x cos(y) + e^{3y}, -e^x sin(y) + 3xe^{3y}]$ $O \ J = [e^{x}cos(y) + e^{3y}, e^{x}sin(y) + xe^{3y}]$ $\bigcirc \quad J = [e^x cos(y) + e^{3y} - 2, -e^x sin(y) + 3xe^{3y} - 2]$ $O J = [e^x cos(y) + e^{3y} - 2, e^x sin(y) + xe^{3y} - 2]$ **⊘** Correct Well done! 3. For $f(x,y,z)=e^xcos(y)+x^2y^2z^2$, calculate the Jacobian row vector J . 1/1 point $O J = [e^x cos(y) + 2xy^2z^2, e^x sin(y) + 2x^2yz^2, 2x^2y^2z^2]$ $\bigcirc \quad J = [e^x sin(y) + 2xy^2z^2, -e^y sin(x) + 2x^2yz^2, 2x^2y^2z^2]$ $\bigcirc \quad J=[e^xcos(y)+xy^2z^2,-e^xsin(y)+x^2yz^2,x^2y^2z]$ **⊘** Correct 4. For $f(x,y,z)=x^2+3e^ye^z+cos(x)sin(z)$, calculate the the Jacobian row vector and evaluate at the 1/1 point $\operatorname{point}(0,0,0).$ $\bigcup J(0,0,0) = [2,3,0]$ $\int J(0,0,0) = [3,0,2]$ $\int J(0,0,0) = [0,2,3]$ **⊘** Correct



Well done!