Calculus 3 Workbook

Directional derivatives

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DIRECTIONAL DERIVATIVES

1. Find the directional derivative in the direction of $\vec{v} = \langle 2,2,1 \rangle$.

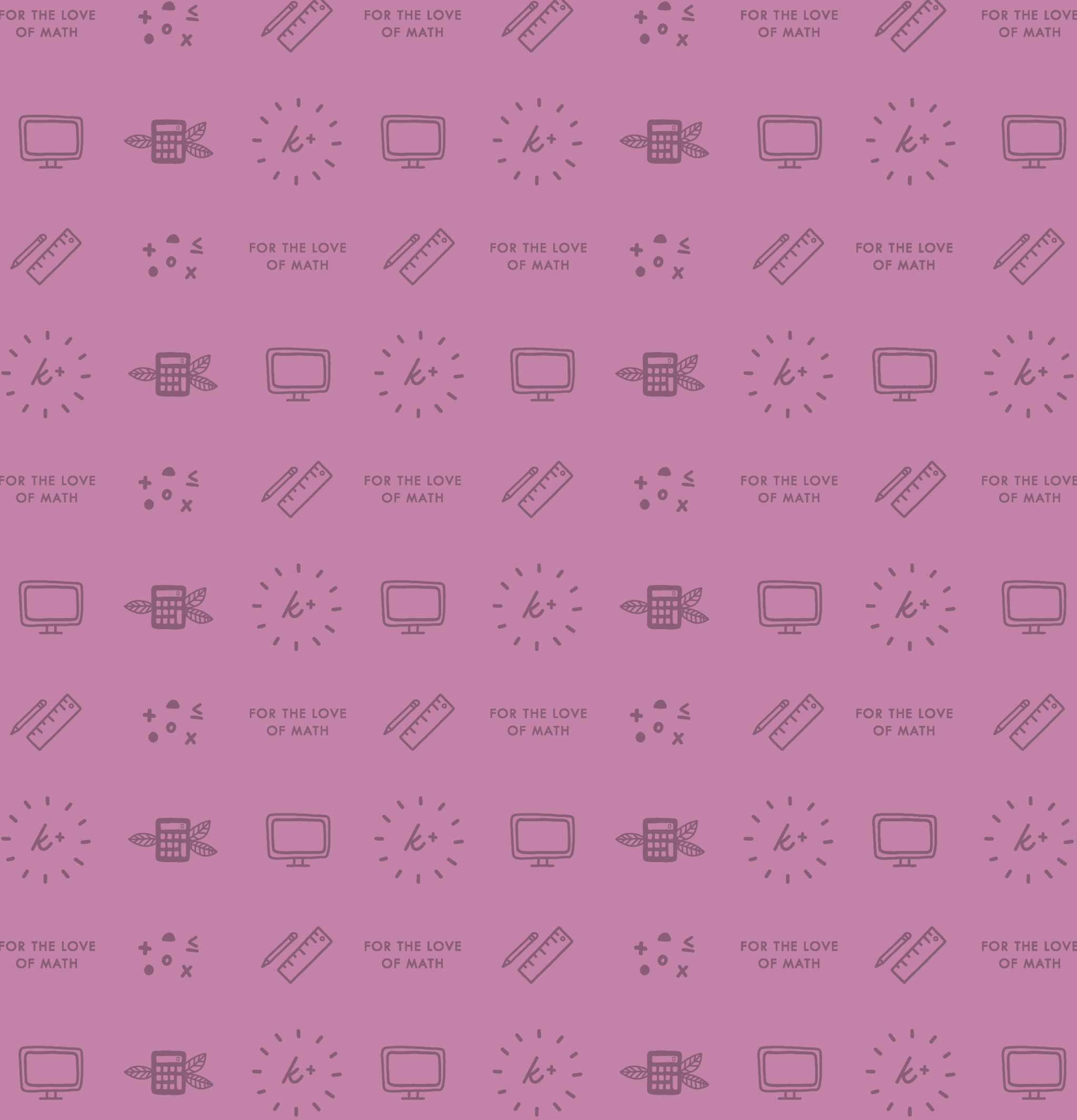
$$f(x, y, z) = \cos(2x + 3y + z)$$

2. Find the directional derivative in the direction of $\vec{v} = \langle 0, -3, -4 \rangle$.

$$f(x, y, z) = x^2 \ln(y - z)$$

3. Find the directional derivative in the direction of $\vec{v} = \langle 3, -6,2 \rangle$ at the point $A(\pi/2,1/2,\pi)$.

$$f(x, y, z) = x \sin(yz)$$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