

Worksheet 11
11/10/2022

1. Find y' from

(a) $y = \frac{1}{\sqrt[3]{x+\sqrt{x}}}$

(b) $x^2 + 4xy + y^2 = 13$

(c) $\sqrt{\sin \sqrt{x}}$

(d) $y = \left(x + \frac{1}{x^2}\right)^{\sqrt{7}}$

2. Let $y = \sqrt{x}$.

(a) Find the differential dy .

(b) Evaluate dy and Δy if $x = 1$ and $dx = \Delta x = 1$.

(c) Sketch a diagram showing the line segments with lengths dx , dy , and Δy .