

WORKSHEET 3 ⁷/₈
 CALCULUS I
 ADDENDUM / ERRATA IN HAAS – WEIR – THOMAS BOOK
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page 56:

11. $f(x) = \left(\frac{1}{x-2} \right) - 3x$ such that $f: (-\infty, 2) \cup (2, \infty) \longrightarrow \mathbb{R}$

13. A. Let $f(x) = \left(\frac{x+1}{x^2-4x+3} \right)$ such that $f: D \longrightarrow \mathbb{R}$ where D is the largest subset of \mathbb{R} where it makes f

well defined (the maximal subset of \mathbb{R} that is the domain of f). Find D .

B. Do problem 13.

15. $f(x) = |x-1| + \sin(x)$ such that $f: \mathbb{R} \longrightarrow \mathbb{R}$

17. $f(x) = \left(\frac{\cos(x)}{x} \right)$ such that $f: (-\infty, 0) \cup (0, \infty) \longrightarrow \mathbb{R}$

19. A. Let $f(x) = \csc(2x)$ such that $f: D \longrightarrow \mathbb{R}$ where D is the largest subset of \mathbb{R} where it makes f well defined (the maximal subset of \mathbb{R} that is the domain of f). Find D .

B. Do problem 19.

21. $f(x) = \left(\frac{x \cdot \tan(x)}{x^2+1} \right)$ such that $f: \mathbb{R} \longrightarrow \mathbb{R}$

23. $f(x) = \sqrt{2x+3}$ such that $f: \left[-\frac{3}{2}, \infty \right) \longrightarrow \mathbb{R}$

25. $f(x) = (2x-1)^{\frac{1}{3}}$ such that $f: \mathbb{R} \longrightarrow \mathbb{R}$

page 66:

Exercises 1 – 6 : delete the nonsense about calculators. With regard to problems 1 and 2, you should be able to visualise the graphs from our review of pre-calculus systematic graphing. For problems 3 – 6 who gives a hoot about the graph; so, yes you can use Maple or Mathematica for a graph of 3 – 6; but it is unnecessary. Do not *ever* use a calculator for this class – it is a crutch for a person who needs not a crutch.