

MEMORIAL UNIVERSITY OF NEWFOUNDLAND

DEPARTMENT OF MATHEMATICS AND STATISTICS

SECTION 2.2 (PART ONE)

Math 1090 Worksheet

FALL 2009

For practise only. Not to be submitted.

1. Simplify each of the following.

(a) $|7 - 3|$

(b) $|3 - 7|$

(c) $|-3 - 7|$

(d) $|8| - |-1|$

(e) $|-2 \cdot 4|$

(f) $-2 \cdot |4|$

(g) $\frac{5}{|-5|}$

(h) $\frac{|-3 + 3|}{3}$

(i) $\frac{|-3| + |3|}{3}$

2. Given $f(x) = |6 - 3x| - 2$, compute each of the following.

(a) $f(2)$

(b) $f\left(\frac{11}{3}\right)$

(c) $f(-1)$

3. Given $g(x) = \left|3x - \frac{5}{2}|x|\right|$, compute each of the following.

(a) $g(4)$

(b) $g(-4)$

(c) $g(-1)$

4. Write each of the following as a piecewise function.

(a) $f(x) = \left|\frac{1}{3}x\right|$

(b) $y = \frac{|4x| + 6}{2}$

(c) $f(x) = 2 - |x|$

5. Solve each of the following inequalities. Give the solution as an interval.

(a) $-4x > 9$

(b) $4 - 3x \leq x + 8$

(c) $2 \geq \frac{1}{3}(6 - x)$