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1-1 - 1-3 Summary

Ex. 1 Evaluate the function at each value and sketch a graph.

$$f(x) = \begin{cases} x+2, & x < 0 \\ 4, & 0 \leq x < 2 \\ x^2, & x \geq 2 \end{cases}$$

$f(-2) = 0$
 $f(1) = 4$
 $f(2) = 4$

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Ex. 2 Evaluate the function at each value and sketch a graph.

$$f(x) = \begin{cases} x^2, & x < -1 \\ 2x+3, & -1 \leq x < 1 \\ 3, & x > 1 \end{cases}$$

$f(-2) = 4$
 $f(-1) = 1$
 $f(2) = 3$

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Ex. 3 Describe the increasing or decreasing behavior of the function.

$$f(x) = x^3 - 3x$$

Increasing $(-\infty, -1)$
 Decreasing $(-1, 1)$
 Increasing $(1, \infty)$

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Ex. 4 Describe the increasing or decreasing behavior of the function.

$$f(x) = x^2 - 5$$

Decreasing $(-\infty, 0)$
 Increasing $(0, \infty)$

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Ex. 5 Graph.

$$f(x) = [x]$$

x	y
1	1
1.5	1
1.99	1
2	2

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Homework

p.11 #3-17, 25-43, 57 odds
p.24 #5-9, 27-41, 53-59 odds
p.38 #1-21, 43-49 odds

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