

# GROUP QUIZ 1 QUESTIONS

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Compute the area under  $f(x) = 3x^2 - 6x + 5$  over  $[-1, 2]$  using the limit of the left endpoint sum.

Compute the area under  $f(x) = 3x^2 - 4x + 3$  over  $[-2, 1]$  using the limit of the left endpoint sum.

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**[MULTIPLE CHOICE]** Suppose that the left endpoint sum underestimates, and the midpoint sum overestimates, the area under  $f(x)$  on  $[a, b]$ . Which of the following could describe  $f(x)$  ?

- |     |                         |     |                           |     |                         |     |                           |
|-----|-------------------------|-----|---------------------------|-----|-------------------------|-----|---------------------------|
| [a] | increasing & concave up | [b] | increasing & concave down | [c] | decreasing & concave up | [d] | decreasing & concave down |
|-----|-------------------------|-----|---------------------------|-----|-------------------------|-----|---------------------------|

**[MULTIPLE CHOICE]** Suppose that the right endpoint sum overestimates, and the midpoint sum underestimates, the area under  $f(x)$  on  $[a, b]$ . Which of the following could describe  $f(x)$  ?

- |     |                         |     |                           |     |                         |     |                           |
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