

Welcome to MA 161

Instructor: Michael Kraminski

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How to get Help

- Piazza forum
(link on course webpage)
- SI
 - leader: Brittany Mills
 - sessions: Monday through Thursday
12:00 - 12:50 pm
 - office hour: Friday
12:00 - 1:00 pm
 - access through a special
course in Brightspace

Homework

- Found in Pearson's MyLab Math
(access through Brightspace)
- Homework due at 11:00pm
every class day
- No late homework accepted
(3 lowest scores will be
dropped)

Quizzes

- Found in MyLab
- Due at 6:00 AM every
class day
- No make-up quizzes (2
lowest scores will be dropped)

Zoom Sessions

- Format
 - (5 mins) Homework Questions from previous lesson
 - (10 mins) Overview of important topics from the lesson
 - (15 mins) Group work in Breakout Rooms
 - (10 mins) Class-wide discussion of Breakout Room problems
- Each group will be awarded up to 3 points for their work in the Breakout Rooms and Class-wide discussion

Exams

- 2 midterm exams in MyLab
- 1 final exam, details announced later

Academic Accommodations

- Contact me via email (haminsk@m.purdue.edu)

Academic Honesty

- Only use built-in calculator in MyLab
- Please do not use Chegg, Symbolab, etc.

Let $f(x) = x^2 - x$.

Find the difference quotient

$$\frac{f(2+h) - f(2)}{h}$$

Solution:

$$\begin{aligned} f(2+h) &= (2+h)^2 - (2+h) \\ &= h^2 + 2h + 4 - 2 - h \\ &= h^2 + h + 2 \end{aligned}$$

$$\begin{aligned} f(2) &= 2^2 - 2 \\ &= 2 \end{aligned}$$

Hence:

$$\begin{aligned} \frac{f(2+h) - f(2)}{h} &= \frac{h^2 + h}{h} \\ &= h + 1 \end{aligned}$$

The graph of $y = f(x)$ is moved horizontally 3 units to the right and then reflected across the x -axis. What function has its graph?

Solution:

Shift horizontally $\longleftrightarrow$ Subtract 3 units right $\longleftrightarrow$ 3 from the inside of the function

Reflect across $\longleftrightarrow$ Multiply the x -axis outside of the function by -1

Hence:

$$-f(x-3)$$