SMART Enough to Collaborate...

Why SMART Boards? WHY???
So, why?

a. We wanted to force new technology on library staff.

b. They look cool.

c. To make the technology available for student use.

d. Two words: YouTube Videos!
And the survey says . . .

Space Study Results (2010)

<table>
<thead>
<tr>
<th></th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group Study Rooms</td>
<td>88%</td>
</tr>
<tr>
<td>Peer Tutoring</td>
<td>77%</td>
</tr>
<tr>
<td>Big Tables</td>
<td>70%</td>
</tr>
<tr>
<td>Presentation Rooms</td>
<td>67%</td>
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</tbody>
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The Great SMART Board Experiment!

**Goal:** To foster collaborative group work

**Action:** Installed 10 SMART Boards in Summer 2012
Measuring Success: The Survey

Methodology:
- Student-Submitted Surveys (22)
- Staff Observation Surveys (35)
  *Collected, Fall 2012

What are you working on? What applications are you using? For what course? For which faculty member? . . . .

Do you like these things or what?
Gathering More Detail: We are watching you!

February & March 2013

With student permission, we captured screen shots of the SMART Boards every 5 minutes.

54.9% of students who logged in chose to participate.
Results

- Expected uses
  - group projects and presentations
  - homework assignments
  - peer-to-peer tutoring and studying

- Creative uses
  - watching lab dissection videos
  - tracing a larger image onto a banner for Dance Club

- Uses Across the Disciplines
A philosophy professor assigns letter grades on a test according to the following scheme:

- A: Top 5% of scores
- B: Scores below the top 5% and above the bottom 58%
- C: Scores below the top 42% and above the bottom 20%
- D: Scores below the top 80% and above the bottom 7%
- F: Bottom 7% of scores

Scores on the test are normally distributed with a mean of 67.7 and a standard deviation of 8.2. Find the numerical limits for a C grade. Round your answers to the nearest whole number, if necessary.

Enter your answer in the boxes below:

Answer: _______ and _______

27.05 - 67.7

Standard Normal Table $-\infty$ to $-z$

8.2

Standard Normal Table $-\infty$ to $z$

71.76 - 67.7
1. Assume that the impulse response for some sensor is given by
\[ r(t) = R_0 e^{-0.1t}. \]
If the system input variable is \( u(t) \) and the system output variable is \( y(t) \), then determine
a. the system transfer function (i.e., \( H(s) = \frac{Y(s)}{X(s)} \)); and,
b. the governing differential equation.

For the transfer function given in exercise E2.4 (page 135 of the text), determine
a. the numerical value of all system zeros and poles;
b. whether or not the system is BIBO stable (justify your answer by noting what constraint must be met for BIBO stability);
c. the system response (i.e., \( y(t) \)) if \( r(t) = \delta(t) \); and
d. the type of transient response (i.e., critically damped, over damped or under damped) that the system would have to a step input (justify your answer in the context of the pole locations).

3. For the block diagram of Exercise E2.12 (page 137 of the text), determine the transfer functions \( T_1(s) = Y(s)/R(s) \) and \( T_2(s) = Y(s)/T_d(s) \).


5. Problem P2.24 (pages 145–146 of the text) parts (a), (b) and (c).

6. Problem P2.36 (page 149 of the text) parts (a) and (c). Also, based on your work in part (c), indicate whether or not the system is BIBO stable.
Primate evolution

- Primates vary/varied because they adapted to diverse ecological niches
- Modern primates share homologies reflecting common arboreal heritage
Use statistics

July 10, 2012 – May 5, 2014

- 8891 SMART board uses

July 10, 2012 – March 13, 2013 (Research Phase)

- 1327 unique users
- 64.5% repeat users
- Most popular day: Tuesday
- Most popular time: 12pm and 2pm
Student Responses

- Best idea ever!
- Good investment
- I wish they were here 3 years ago!
- I love them! (3)
- Smart / smart idea (4)
- So much room for activities
- So nice for group studying
- Great for group projects
- So fancy!
- Put one in each resident hall!
- I FEEL LIKE TONY STARK!
Getting the Word Out on Campus

- Workshop: Strategies for Using Smart Boards to Facilitate Peer Review and Improve Student Writing (Feb. 2014)
- Copy Cats!: More SMART Boards appearing across campus
- Next Steps: Contacting faculty to gather assignment data
Library info & policies

- 11 total SMART Boards
  - 2 on 1st floor of Pace Library
  - 8 on 2nd floor of Pace Library
  - 1 at the Professional Studies Library

- Tools may be checked out at the Circulation Desk
Conclusion

- Woot!
- Response has been overwhelmingly positive
- Great for peer-to-peer collaboration; group homework; editing presentations; student happiness