Ima Student
Homework number 1, due July 4, 1776
Odd numbered questions

1. Who's buried in Grant's tomb? In particular,
   (a) Is *anyone* buried in Grant's tomb?
   (b) Does the tomb really belong to Grant?
      Here's some text that's part of the answer. Here's some text that's part of the answer. Here's some text that's part of the answer. Here's some text that's part of the answer. Here's some text that's part of the answer. Here's some text that's part of the answer. Here's some text that's part of the answer. Here's some text that's part of the answer. Here's some text that's part of the answer.
   (a) It depends on what you mean by *buried*.
   (b) Perhaps, because C(6, 2) = $\binom{6}{2}$.
   Then again, P(6, 2) = $\frac{6!}{4!}$. That's worth repeating more prominently:
   $$P(6,2) = \frac{6!}{4!}$$

3. What was the color of George Washington's white horse?
      It was a very pale blue, easily mistaken for white. Some may doubt this, but it's important to remember that
   - a pale blue viewed in the reddish light of evening can appear white,
   - the artist had run out of blue paint, and thought he could get by with an approximation, and
   - blue is a nice color.

5. The restriction is that no one gets a matching pair, i.e. person one does not get a matching pair, person 2 doesn't...etc. Therefore, we let:

   A = arrangements where A gets a matching pair

   B = arrangements where B gets a matching pair

   C= arrangements where C gets a matching pair

   D = arrangements where D gets a matching pair

   E = arrangements where E gets a matching pair

   Since we are computing the num of arrangements where no one gets a matching pair, we are computing

   (a) The world is all that is the case. Thus, the world will not only fit into the case, it *is* the case.

(b) (i) It's actually a rather nice case.
     (ii) We shall give $C(3,1) = \binom{3}{1} = P(3,1)$ examples, but
          we shall not do that here.

7. What is e^x?

We have
$$e^x = 1 + x + \frac{x^2}{2!} + \frac{x^3}{3!} + \cdots$$
which came out large since it was typeset as a display.