Problem Set 4 for Economics 180.266: 
Financial Markets and Institutions 
Due at the beginning of class on October 22

Note: Point totals are shown at the beginning of each question.

1. (30 pts) Hopkins enterprise shares sell for $50 each. You believe that it is over-valued, and short 1000 shares. Initial margin is 50 percent and maintenance margin is 25 percent.
   (a) How much margin (in dollars) do you have to put up in order to borrow the shares?
   (b) If the price rises, at what price level will you receive an additional margin call?
   (c) If the price jumps to $70, how much extra margin would you have to post?

2. (20 pts). Consider the following limit order book.

<table>
<thead>
<tr>
<th>Price ($/share)</th>
<th>Quantity (Shares)</th>
<th>Price ($/share)</th>
<th>Quantity (Shares)</th>
</tr>
</thead>
<tbody>
<tr>
<td>77</td>
<td>500</td>
<td>78</td>
<td>200</td>
</tr>
<tr>
<td>76</td>
<td>500</td>
<td>79</td>
<td>600</td>
</tr>
<tr>
<td>75</td>
<td>1000</td>
<td>80</td>
<td>400</td>
</tr>
</tbody>
</table>

You submit a market order to buy 1,000 shares. What is the total price that you will pay for your 1,000 shares?

3. (30 pts).
   (a) What was the offer price of Facebook shares (FB US Equity) in its IPO in May 2012?
   (b) Find the closing prices of Facebook on the following days:
      May 18, 2012 (first trading day)
      August 17, 2012
      September 18, 2018
   (c) Was the first-day price change typical for an IPO?
   (d) Was the change over the subsequent three months typical for an IPO?

4. (20 pts). Suppose that you had invested $100 (US currency) in the MSCI indices of each of the G7 countries on December 31, 1969. The G7 countries are US, Canada, Japan, Germany, France, Italy and UK. Using the MSCI Total Return US Dollar Indices,
   (a) Which of these 7 markets would have given you the highest return as of September 30, 2019?
   (b) Which of these 7 markets would have given you the lowest return as of September 30, 2019?