IBM International Business Machines

| Bid | | | | Ask | | | |
|---------------|-------|------|----------|--------|--------|------|----------|
| ID | Price | Size | Time | ID | Price | Size | Time |
| | | | | | | | |
| ARCAEX | 92.60 | 1000 | 10:44:39 | INET | 92.64 | 400 | 10:44:11 |
| INET | 92.60 | 1000 | 10:44:39 | INET | 92.65 | 500 | 10:44:44 |
| ARCAEX | 92.57 | 800 | 10:44:16 | ARCAEX | 92.66 | 1300 | 10:44:32 |
| ARCAEX | 92.56 | 1200 | 10:42:56 | INET | 92.66 | 1100 | 10:44:42 |
| INET | 92.56 | 1400 | 10:43:32 | INET | 92.68 | 300 | 10:44:25 |
| INET | 92.55 | 700 | 10:43:05 | ARCAEX | 92.69 | 1100 | 10:43:48 |
| ARCAEX | 91.90 | 2000 | 10:04:20 | INET | 92.69 | 1100 | 10:43:47 |
| INET | 91.90 | 2000 | 10:04:20 | ARCAEX | 92.73 | 800 | 10:43:57 |
| INET | 91.70 | 1000 | 10:42:44 | INET | 92.77 | 1 | 09:30:14 |
| INET | 91.65 | 1000 | 10:26:34 | INET | 93.13 | 2000 | 10:38:48 |
| INET | 90.00 | 500 | 09:02:19 | ARCAEX | 93.14 | 2000 | 10:03:45 |
| INET | 81.45 | 1 | 07:01:11 | ARCAEX | 93.15 | 700 | 09:10:22 |
| INET | 74.41 | 3 | 07:01:07 | INET | 93.47 | 1000 | 10:26:34 |
| INET | 20.00 | 10 | 07:01:06 | INET | 93.52 | 1000 | 10:42:44 |
| ARCAEX | 0.01 | 100 | 08:26:26 | INET | 95.50 | 25 | 09:31:07 |
| | | | | ARCAEX | 96.00 | 200 | 08:01:05 |
| | | | | ARCAEX | 96.21 | 500 | 09:30:56 |
| | | | | INET | 100.00 | 1 | 07:01:08 |
| | | | | INET | 103.00 | 50 | 07:01:06 |
| | | | | ARCAEX | 185.60 | 100 | 08:38:41 |
| | | | | | | | |

- 1. What is the bid-ask spread?
- 2. What is the cumulative depth at 91.90?
- 3. How does the limit order book change if a sell limit order comes in at 92.70?
- 4. If a market order to sell 200 shares comes in, how does the limit order book change? At what price(s) did this get executed?
- 5. If a market order to buy 1000 shares comes in, how does the limit order book change? At what price(s) did this get executed?
- 6. How does the limit order book change if a buy limit order comes in at 92.62?