Show all work! For the purposes of this quiz you may assume that all 6 -month periods are exactly one-half of a year.

1. Suppose that today is November 15, 2019. You observe the following quotes on Bloomberg.

| Security | Bid Quote | Ask Quote |
| :---: | ---: | ---: |
| May 15 2020 STRIPS | 96.25 | 96.35 |
| 10\% May 15 2020 Bond | 101.34 | 101.41 |

(a) ( $\mathbf{1 4}$ points) Which one of these 2 securities is trading rich relative to the other one? Explain.
(b) (24 points) Is there an arbitrage opportunity in this market? Explain.
(c) Suppose that transactions costs were higher - the midpoint of both spreads is the same, but the bid ask spreads are wider:

| Security | Bid Quote | Ask Quote |
| :---: | ---: | ---: |
| May 15 2020 STRIPS | 96.10 | 96.50 |
| $10 \%$ May 15 2020 Bond | 101.30 | 101.45 |

(d) ( 24 points) How does this change in transaction costs affect your arb trade? Explain.
2. Suppose that today is August 15, 2019. You observe the following quotes on Bloomberg.

| Security | Bid Quote | Ask Quote |
| :---: | ---: | ---: |
| $3 \%$ February 15 2020 Note | 98.44 | 98.56 |
| $7.5 \%$ February 15 2020 Bond | 100.84 | 100.91 |

(a) ( $\mathbf{1 4}$ points) Which one of these 2 securities is trading rich relative to the other one? Explain.
(b) (24 points) Is there an arbitrage opportunity in this market? Explain.

