2. Copper reacts with nitric acid as shown in the redox equation below.

$$Cu(s) \ + \ 4 \ H^{\scriptscriptstyle +}(aq) \ + \ 2 \ NO_3^{\scriptscriptstyle -}(aq) \ \rightarrow \ Cu^{2 +}(aq) \ + \ 2 \ NO_2(g) \ + \ 2 \ H_2O(\ell)$$

Which one of the following states the change in the oxidation number of nitrogen?

- (a) 3+ to 0
- (b) 5+ to 4+
- (c) 3+ to 2+
- (d) 5+ to 0