

3. Crude oil is extracted, transported, and refined for various uses by humans.

- (a) **Describe** one environmental impact on marine ecosystems associated with extraction or transportation of crude oil.
- (b) **Identify** an atmospheric pollutant released during the combustion of refined oil products.
- (c) **Propose** a solution an individual can use to reduce their reliance on refined oil products for transportation.
- (d) **Justify** the solution proposed in part (c) by providing a benefit to human health.

Other natural resources, such as gold and silver, are also extracted. These resources can be used to make components for the electronics humans use. One metric ton of gold ore contains 5.0 grams of gold.

- (e) A deposit is estimated to contain 260 million metric tons of gold ore. **Calculate** the number of grams of gold that could be extracted from the deposit. **Show** your work.
- (f) Assuming the price of gold is \$62.56 per gram, **calculate** the value of the gold that could be recovered from 1,000 metric tons of gold ore in the deposit. **Show** your work.
- (g) A typical cell phone contains 0.034 grams of gold. **Calculate** how many metric tons of gold ore would need to be mined to extract enough gold to manufacture 100,000 cell phones. **Show** your work.

Begin your response to this question at the top of a new page in the separate Free Response booklet and fill in the appropriate circle at the top of each page to indicate the question number.

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