Writing Workshop

Questions and Proposed Answers

E100.250 Fall 2016
**Number 1**  
*Adapted from a report describing plastic, removable spikes to be put into track shoes.*  
Our device is a dome-shaped spike for running shoes that uses a screwdriver rather than a wrench-like key for the insertion and removal method. (Adapted from student work)

Faulty predications: a spike cannot use a screwdriver. A key is not method.

**Number 2**  
Like any plucked instrument, mandolin notes decay to silence rather than sound out continuously as with a bowed note on a violin, and mandolin notes decay faster than larger stringed instruments like the guitar. (Wikipedia article on the mandolin)

Faulty predications: mandolin notes are not a plucked instrument. Mandolin notes are not stringed instruments.
Number 3
From a storm warning from the National Weather Service, 24 Feb. 2016.
Snow removal will be more challenging as snow character will be heavy and wet during
Wednesday afternoon and evening.

Fault: use “snow,” not “snow character.” Surplusage. Put a comma after the first
clause and use a definite article before “snow.” Use “because” and not “as” because
the latter can be ambiguous.

Snow removal will be more challenging because the snow will be heavy and wet during
Wednesday afternoon and evening.

Number 4
Adapted from an application to graduate school.
To approach the challenge of prescription drugs, I intend to research and develop bio-
nanoparticles that work with the human immune systems. These will essentially act as
white blood cells fighting and curing any viruses or any other pathogens.

This paragraph is difficult to fix because much what is written is unclear.

Faults: Who knows what is meant by the “challenge of prescription drugs?” “systems”
in this context should not be a count noun, and, thus, not plural. Viruses and
pathogens are not cured, though the system afflicted with them can be.
Number 5
(This example is found on page 410 of Olsen and Huckin’s Technical Writing and Professional Communication, 2nd Ed, New York, McGraw-Hill, 1991.)

Utility costs for the argon process are 75% greater than for the proposed hydrogen process. Initial capital cost is $5.4 million, roughly three times the hydrogen process cost. However, annual income from the sale of argon, increased ammonia production, and reduced natural gas requirements elsewhere in the plant is 160% higher than that generated by the hydrogen process. Present-worth analysis shows that the argon process is the better investment. The present worth of the argon process is $10.25 million. The present worth of the hydrogen process is $4.14 million.

Suggested answer
The initial capital cost of the argon process is $5.4 million, roughly three times the hydrogen process cost. However, present-worth analysis shows that the argon process is the better investment. Utility costs for the argon process are 75% greater than for the proposed hydrogen process, however, annual income from the sale of argon, increased ammonia production, and reduced natural gas requirements elsewhere in the plant is 160% higher than that generated by the hydrogen process. Thus, the present worth of the argon process is $10.25 million, while the present worth of the hydrogen process is $4.14 million.
Number 6
Adapted from a student report on the differing energy content of gasoline and renewable fuels.
A problem associated with the lower energy content of renewable fuels, such as ethanol, is that the engines currently in most vehicles are not optimized for the use of these fuels, creating a lower efficiency within the engine compared to regular gasoline. The higher octane rating associated with renewable fuels allows a higher compression ratio of the engine, aiding in preventing knock, protecting the engine, and allows increased thermal efficiency power and reliability within an engine designed to handle the higher octane values. A typical engine using an ethanol blend with gasoline blended with 10% ethanol will result in 4% to 5% less miles per gallon. Flex fuel (E85), which is an ethanol blend with between 51% and 83% ethanol, is expected to get 15% to 30% fewer miles per gallon than pure gasoline in a typical engine. As regards drivers, they will not notice a performance loss while using the E85 blend, but may have the experience of more torque and horsepower instead.

Please spot as many errors or unhappy expressions in the paragraph below, and then re-write the paragraph to improve it.
Number 6
Adapted from a student report on the differing energy content of gasoline and renewable fuels.
A problem associated with the lower energy content of renewable fuels, such as ethanol, is
that the engines currently in most vehicles are not optimized for the use of these fuels,
creating a lower efficiency within the engine compared to regular gasoline. The higher
octane rating associated with renewable fuels allows a higher compression ratio of the
engine, aiding in preventing knock, protecting the engine, and allows increased thermal
efficiency power and reliability within an engine designed to handle the higher octane
values. A typical engine using an ethanol blend with gasoline blended with 10% ethanol
will result in 4% to 5% less miles per gallon. Flex fuel (E85), which is an ethanol blend
with between 51% and 83% ethanol, is expected to get 15% to 30% fewer miles per
gallon than pure gasoline in a typical engine. As regards drivers, they will not notice a
performance loss while using the E85 blend, but may have the experience of more torque
and horsepower instead.

Please spot as many errors or unhappy expressions in the paragraph below, and then re-write the
paragraph to improve it.
A problem with renewable fuels such as ethanol, apart from their lower energy content, is that the engines now in most vehicles are not designed to use them most efficiently. Thus, a typical engine running on gasoline blended with 10% ethanol will achieve 4% to 5% fewer miles per gallon, and one running on E85 Flex fuel (a blend with between 51% and 83% ethanol) will achieve 15% to 30% fewer miles per gallon. Apart from a decline in mileage, however, drivers will not notice a drop in performance with E85, and their vehicles’ engines may produce more torque and horsepower.

The higher octane rating associated with renewable fuels allows a higher compression ratio of the engine, aiding in preventing knock, protecting the engine, and allows increased thermal efficiency power and reliability within an engine designed to handle the higher octane values.