

**AP<sup>®</sup> COMPUTER SCIENCE PRINCIPLES  
2016 PILOT SCORING COMMENTARY**

Performance Task: Explore — Impact of Computing Innovations

For Sample Responses Receiving a **Medium** Score

**Sample Response C**

Criteria	Points Earned	WHY this sample EARNED this point	WHY this sample DID NOT EARN this point
Criteria 1: The computational artifact identifies the <b>computing innovation</b> and provides an illustration, representation or explanation of the computing innovation's intended purpose, function, or effect.	1	The computational artifact identifies bitcoins as a computing innovation and explains the purpose of Bitcoins as cryptocurrency that can be used for online selling and purchasing of items.	
Criteria 2: States a plausible fact about the <b>computing innovation's</b> intended purpose or function.	1	The response states that the exchange rate of 1 bitcoin to US dollars, which fluctuates daily, ranges from a few cents to over 900 dollars.	
Criteria 3: Identifies at least ONE effect of the <b>computing innovation</b> .	1	The response identifies a benefit of bitcoin as having a high exchange rate, so "buyers and sellers can earn a lot of money over a short period of time."	
Criteria 4: Identifies a beneficial effect AND a harmful effect of the <b>computing innovation</b> . Explains how ONE of the identified effects impacts society, economy, or culture.	1	The response identifies the benefit of bitcoin as having a high exchange rate, so "buyers and sellers can earn a lot of money over a short period of time." The impact of this is identified as "someone with very little initial income could make money by buying a low cost mining rig and starting off small, then working their way up." A harmful effect of using bitcoin is identified as "bitcoin cannot be traced" and individuals can then use it to "purchase illegal items, particularly on the deep web."	
Criteria 5: Identifies the data that the <b>computing innovation</b> uses. Explains how that data is consumed, produced, OR transformed.	0		The response states how a computer mines for bitcoin by "solving equations to generate numbers that are equivalent to decimals of a bitcoin" and that by "mining bitcoins, you are transforming data into money." However, the response doesn't identify the data that is being transformed into money.
Criteria 6: Identifies one storage, privacy, OR security concern. Explains how the concern is related to the <b>computing innovation</b> .	0		The response expresses a concern linked to bitcoin usage as "the possibility of using this currency for illegal items, which can be a health and security threat." However, this is not a storage, privacy, or security concern associated with bitcoin.
Criteria 7: Provides inline citations of at least 3 attributed sources with the written response. The citations must be used to justify the response.	0		The response contains no inline citations.
<b>Total</b>	<b>4</b>		

## Sample Response D

Criteria	Points Earned	WHY this sample EARNED this point	WHY this sample DID NOT EARN this point
Criteria 1: The computational artifact identifies the <b>computing innovation</b> and provides an illustration, representation or explanation of the computing innovation's intended purpose, function, or effect.	1	The computational artifact identifies the computing innovation as the Daqri Smart Helmet and explains part of its function is to display information on the environment.	
Criteria 2: States a plausible fact about the <b>computing innovation's</b> intended purpose or function.	1	The response states the "purpose for the helmet is to make the work site an easier work environment, and at the same time a safer one too."	
Criteria 3: Identifies at least ONE effect of the <b>computing innovation</b> .	1	The response states one of the effects of the Daqri Smart Helmet is that the "helmet gives the workers x-ray like vision to see problems that a normal person would not see with the naked eye."	
Criteria 4: Identifies a beneficial effect AND a harmful effect of the <b>computing innovation</b> . Explains how ONE of the identified effects impacts society, economy, or culture.	0		While the response identifies several beneficial effects of using the Daqri Smart Helmet, it does not connect these effects to the impact on society, economy, or culture. The response does not identify any harmful effects of this computing innovation.
Criteria 5: Identifies the data that the <b>computing innovation</b> uses. Explains how that data is consumed, produced, OR transformed.	1	The response identifies the data being consumed as scans of the environment using multiple cameras. It also states that it uses video and audio as input and output. (E.g., "The smart helmet uses all types of data input and output from video to audio.")	
Criteria 6: Identifies one storage, privacy, OR security concern. Explains how the concern is related to the <b>computing innovation</b> .	1	The response states that "because the helmet is constantly recording everything," this is a privacy concern. This can become a legal issue since people who are being recorded can sue the developers of the Daqri helmet and the user for being recorded without permission.	
Criteria 7: Provides inline citations of at least 3 attributed sources with the written response. The citations must be used to justify the response.	0		The response contains no inline citations.
<b>Total</b>	<b>5</b>		