

Activity

6

IRA/NCTE

Standard 3

NTI DAY #7

12th Day Missed

7

Directions: Read the passage below, then answer the questions.

The U. S. space program got a boost in 1997 with the Mars Pathfinder mission. Thousands of people watched as the Sojourner rover landed on Mars. The tiny rover, just 11 kg in weight and 0.6 m in length, could be controlled remotely from Earth. The goal of the mission was to study the environment of Mars. The rover gathered data on soil and rocks on the surface of Mars. It sent back incredible pictures of the Martian surface.

The Mars Pathfinder mission is part of NASA's Discovery missions—low-cost missions to explore Mars. But just how low is the cost? The Mars Surveyor '98 space program cost \$193.1 million to develop, another \$91.7 million to launch, and \$42.8 million to run. This is a hefty price tag for a mission that failed.

The Mars Surveyor '98 was made up of two spacecraft—the *Mars Climate Orbiter* and the *Mars Polar Lander*. The Climate Orbiter reached Mars in September 23, 1999. It was scheduled to pass behind Mars and then reestablish radio contact with Earth. But no radio signal was ever received. Scientists think a mix-up of English and metric measurements caused the Orbiter to get too close to Mars and burn up in its atmosphere.

The *Mars Polar Lander* encountered a similar fate just months later when it disappeared on December 3, 1999. Its mission was to search for water and ice at Mars' south pole. But communication was lost and it's not known whether it ever landed on the planet. A report on the mission assumes that the Lander crashed into the surface of Mars. Apparently, the legs of the Lander interfered with communications. This led scientists to believe that it had landed, so they turned off the engines, making it impossible for it to land safely.

The two lost spacecraft were valued at \$320 million. It's time to reexamine our goals in space exploration and determine whether or not it's worth the price. We cannot continue to invest dollars in space programs and receive nothing in return.

Multiple Choice

- Which two spacecraft on the Mars Surveyor '98 were lost?
 - Polar Lander* and *Climate Orbiter*
 - Climate Orbiter* and *Sojourner*
 - Pathfinder* and *Polar Lander*
 - Climate Orbiter* and *Pathfinder*
- What was NASA's first clue that the *Climate Orbiter* might be in trouble?
 - It did not reestablish radio contact after passing behind Mars.
 - It was orbiting too close to Mars.
 - The engines were turned off.
 - The rover sent back pictures of the mishap.
- Where would an article like the one you just read most likely be published?
 - in an encyclopedia
 - on the editorial page of a newspaper
 - in a factual report written by NASA engineers
 - in a letter to members of Congress to gather support for the space program

Activity 6 (continued)

**Short
Answer**

- 4. Which of these statements from the article is NOT an opinion?
 - a. It's time to reexamine our goals in space exploration and determine whether or not it's worth the price.
 - b. We cannot continue to invest dollars in space programs and receive nothing in return.
 - c. The two lost spacecraft were valued at \$320 million.
 - d. This is a hefty price tag for a mission that failed.

5. In the last sentence, the author writes, "We cannot continue to invest dollars in space programs and receive nothing in return." Do you agree with this statement? Explain.

6. How do you think a group of NASA engineers who worked on this mission might respond to this article?

Question 10 of 28

Determine your first step to solve the equation $5(x + 1) = 4(x + 7)$.

- A. Subtract both sides by 1
- B. Multiply the left side by 5 and the right side by 4
- C. Subtract both sides by $4x$
- D. Divide the left side by -4 and the right side by -5

Question 11 of 28

What is a first step to solving the equation $5x = 4x + 5$.

- A. Divide both sides of the equation by 2
- B. Subtract $4x$ from both sides of the equation
- C. Add 5 to both sides of the equation
- D. Add $4x$ to both sides of the equation

Question 12 of 28

A long distance company charges \$0.10 for the first minute of each call and \$0.04 for each additional minute.

Write a rule to show C , the cost of a call, for a call of m minutes.

- A. $C = \$0.10m + \$0.04m$
- B. $C = \$0.10 + \$0.04m$
- C. $C = \$0.10 + \$0.04(m - 1)$
- D. $C = \$0.10(m) + \$0.04(m - 1)$

Question 13 of 28

To solve the equation $\frac{m}{9} = 11$, what inverse operation must be performed to both sides of the equation?

- A. adding 9
- B. multiplying by $\frac{1}{9}$
- C. multiplying by 9
- D. subtracting 9

Question 14 of 28

Solve for x .

$$\frac{1}{5}x = 3$$

- A. $x = \frac{3}{5}$
- B. $x = 2$
- C. $x = 8$
- D. $x = 15$

Question 15 of 28

Solve for p .

$$p - (-16) = 16$$

- A. $p = 0$
- B. $p = 8$
- C. $p = 16$
- D. $p = 32$

Question 16 of 28

Find the value of m in the following equation: $7m - 8 = 69$.

- A. $8\frac{5}{7}$
- B. 11
- C. 18
- D. 77

Question 17 of 28

Solve for m .

$$m + (-13) = 39$$

- A. $m = \frac{1}{3}$
- B. $m = 3$
- C. $m = 26$
- D. $m = 52$

Question 18 of 28

Solve $-3(-x + 4) + 6 = -15$

- A. -7
- B. -3
- C. -2
- D. 5