

## The Codebreaker Pretest













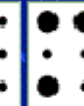













Name \_\_\_\_\_ Grade \_\_\_\_\_ Teacher \_\_\_\_\_

Circle the letter **A**, **B**, **C**, or **D** in front of the response that best answers each question.

1. What are hieroglyphics?
  - A** Binary codes
  - B** Messages from space
  - C** The language used by Morse Code
  - D** The language used by the ancient Egyptians
2. What is the Rosetta Stone?
  - A** A stone in Ireland that brings good luck to all who kiss it
  - B** A stone that contained ancient text in more than one language
  - C** A stone that had to be cleared to build the Brooklyn Bridge
  - D** The stone used to build the Pyramids
3. Who discovered the Rosetta Stone?
  - A** Benjamin Franklin
  - B** One of the astronauts
  - C** One of Napoleon's soldiers
  - D** Frank Lloyd Wright
4. How did spaceships designed to "map the cosmos" send the first pictures of the heavens back to Earth?
  - A** They used film that parachuted back to Earth
  - B** They developed the pictures onboard and sent rockets back to Earth
  - C** They sent signals back to Earth which were decoded
  - D** They never took pictures of the stars
5. When computers store information they use only zeros and ones. In this case, we call these two numbers
  - A** Binary Digits
  - B** Decimal Digits
  - C** Base 5 Digits
  - D** Letters
6. What was the Enigma Machine?
  - A** A machine that the great and powerful Oz used in the movie
  - B** A machine used in World War II to send coded messages
  - C** A machine that sent light and dark images to Earth
  - D** A game made by teachers to teach Algebra

7. Why was Morse Code used?
- A To put prices on products in a grocery store
  - B To make it easier to find a house on an address label
  - C To allow a telephone number to include the state and county
  - D To make it possible to send messages more efficiently

8. Coded messages are everywhere, you see them in highway signs, you hear them when you push buttons on your telephone, and if you had difficulty seeing, you might feel then when you read. Braille is used to help people who can't see read by feel. Each letter is a series of bumps, or raised dots. Here is a Braille Chart for the letters:

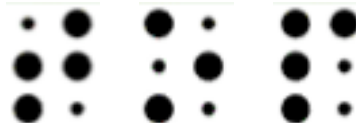
 A	 B	 C	 D	 E	 F	 G	 H	 I	 J	 K	 L	 M
 N	 O	 P	 Q	 R	 S	 T	 U	 V	 W	 X	 Y	 Z

Translate the following message in Braille:



- A NONE    B QUIT    C QUIZ    D PONY

9. Using the same procedure, Translate the following message:



- a. TOM    B TON    C TOW    D TOP

10. In the grid below, if a black box equals zero, and a white box equals 1, which five digits does the grid represent?



- a. 00010    B 11101    C 00100    D 11011

11. Using the same method as in Question 10, which five digits does this grid represent?



- a. 00010   **B** 11101   C 00100   **D** 11011

12. A computer screen is made up of thousands and thousands of tiny dots. Each dot is called a picture element, or *pixel*. The more dots your screen has, the higher the *resolution* of the screen. For example, if your screen was 8 pixels wide, and 6 pixels high, we would say it had a resolution of 8 by 6. How many pixels are on a screen that has a resolution of 8 by 6?

- a. 8   **B** 6   C 48   **D** 86

13. A screen with a resolution of 8 by 6 would have pretty big pixels. If the same screen had a resolution of 80 by 60, would the pixels be bigger or smaller?

- a. Bigger   **B** Smaller   C The same size   **D** Can't tell

14. The higher the resolution of an image, the more pixels it has. Since the computer has to store information for each pixel, it takes more memory to store an image with more pixels. Which image resolution would take the most memory to store?

- a. 8 by 6  
b. 6 by 6  
c. 7 by 7  
d. 6 by 8

15. Sometimes there isn't enough resolution on a screen to make an image correctly. Suppose you wanted to make the letter O by filling in boxes in a grid. What is the smallest grid size you could use to make the letter O?

- a. □ (1 by 1)   **B** □□ (2 by 1)   C 


 (2 by 2)   **D**


 (3 by 3)