



# MATH AND COMPUTER SKILLS SELF ASSESSMENT

The following questions and exercises will help determine if your math and computer skills are ready to help you succeed in the BOC program. Some individuals find they need to refresh these skill sets before beginning this training and certification program.



## MATH SELF EVALUATION

1. There are 10 motors that are less than 2 horsepower each and one 5 horsepower motor. What is the approximate horsepower total that could be running at any time:

- A. 10      B. 2      C. 50      D. 25

2. What is the perimeter of the building diagramed to the right? \_\_\_\_\_ feet.

3. What is the area of the house to the right? \_\_\_\_\_square feet.

4. What is the volume of the house to the right? \_\_\_\_\_ cubic feet.

5. There are 100 lamps in 50 fixtures. Each lamp uses 23 watts of electricity. If the lamps are on for 8 hours, how many kilowatt-hours (kWh) are used?

- A. 18.4      B. 23      C. 9,200      D. 18,400

6. How many inches are in 5 feet? \_\_\_\_\_ inches.

7. One square foot equals how many square inches? \_\_\_\_\_square inches.

8. For the following you may use a calculator and express in decimal or fraction form.

$8\frac{1}{2}'' + 17\frac{3}{4}'' + 23\frac{3}{8}'' = \underline{\hspace{2cm}}$        $23.25 \times 12.75 = \underline{\hspace{2cm}}$        $\frac{3}{8} \times 120 = \underline{\hspace{2cm}}$

$23\frac{1}{4}'' - 7\frac{1}{8}'' = \underline{\hspace{2cm}}$        $350/40 = \underline{\hspace{2cm}}$

9. What is 75% of 2400? \_\_\_\_\_

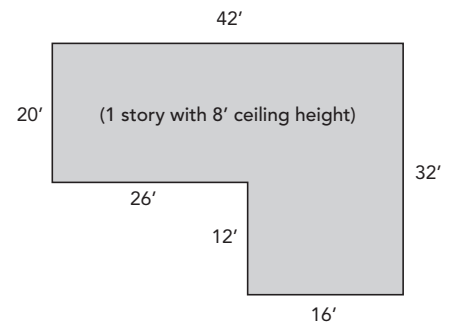
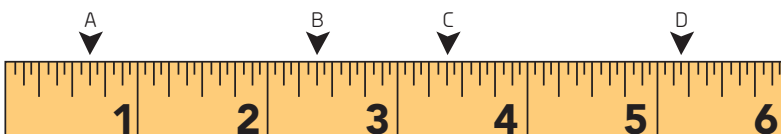
10. What is the final unit value derived from the following equation?

$5 \text{ units} \times 10 \text{ ton/unit} \times \frac{12,000 \text{ BTU/h}}{\text{ton}} \times \frac{\text{kW}}{3412 \text{ BTU/h}} =$

- A. h/ton \_\_\_\_\_      B. ton h \_\_\_\_\_      C. kW \_\_\_\_\_      D. kWh \_\_\_\_\_

11. Write in the measurement indicated by the arrow pointing at the tape measure.

- A. \_\_\_\_\_      B. \_\_\_\_\_      C. \_\_\_\_\_      D. \_\_\_\_\_



## COMPUTER SKILLS SELF-ASSESSMENT

1. Have you used a computer before? .....  YES  NO
2. Do you own a computer? .....  YES  NO
3. If yes, to question 2:
  - What type (laptop or desktop)? .....
  - Do you have home Internet access? .....  YES  NO
4. How well can you word process to create a report?  GOOD  OK  POOR
5. What software programs have you used?
  - Microsoft Word or other word processor? .....  YES  NO
  - Excel or other spreadsheet program? .....  YES  NO
  - Outlook or other email program? .....  YES  NO
  - Internet Explorer or other Internet browser? .....  YES  NO
  - ENERGY STAR Portfolio Manager? .....  YES  NO
  - Other (Please specify): .....

*Nearly everything you'll do with computers revolves around creating content in the form of different types of files using different software programs. You'll need to be comfortable creating, saving, opening, and editing files. Then you'll need to understand storing, organizing, renaming, moving, copying, deleting and backing up your important files. Plan on learning by doing. Mistakes are considered positive learning experiences and are an essential part of using and learning computers. Trouble-shooting gets easier with practice.*

6. Perform the following tasks on the computer?
  - Open three different software programs, resize and position the windows so you can see all three applications on the screen at once.
  - Minimize all three programs and create a new folder on the desktop.
  - Create a word-processing file and save it on the desktop
  - Move this new file into the new folder using drag and drop.
  - Open the folder and confirm you successfully moved the file.
  - Using the Windows Help menus, locate instructions for cut and paste and drag and drop. Point to what tutorials come with Windows for learning about file management (copy, delete, move, rename, view properties).

How many of the six (6) computer tasks above were you able to successfully complete? .....

7. Complete the following steps to create folders and store files.
  - Create a new folder on the desktop named "Test Folder #1" and save a simple word processing document to this folder.
  - Create a folder named "Test Folder #2" within "Test Folder #1" and move the word processing file into this new folder.
  - Put a copy of this file into the first folder you created.
  - Rename this file.
  - Create another new folder on the desktop named "Test Folder #3" and move Test Folder #2 into this folder.
  - Delete all these folders and files.

How many of the six (6) computer tasks above were you able to successfully complete? .....

**END**

## MATH SKILLS SELF-ASSESSMENT ANSWER KEY

- |                      |        |                     |         |              |
|----------------------|--------|---------------------|---------|--------------|
| 1. D                 | 5. A   | 8. 49.625 or 49 5/8 | 9. 1800 | 11. A = 5/8" |
| 2. 148 feet          | 6. 60  | 16.125 or 16 1/8    | 10. C   | B = 2 3/8"   |
| 3. 1,032 square feet | 7. 144 | 296.4375            |         | C = 3 3/8"   |
| 4. 8,256 cubic feet  |        | 8.75                |         | D = 5 3/16"  |
|                      |        | 45                  |         |              |