

## Lesson 3.5: Assessment Exercises

### Objectives

After completing this lesson, students will:

- ❖ Have an understanding of how much they learned and understood during Unit 3

### Agenda

- |   |         |
|---|---------|
| 1. Student Activity: Assessment Puzzles | 30 mins |
| 2. Class Activity: Review Answers       | 20 mins |

### Preparation

- Print student activity worksheet (one per student)

### Resources & Links

- None

### 1. Student Activity: Assessment Puzzles

Distribute one worksheet per student. This is an assessment activity for material covered in Unit 3. Explain the activity to students. Leave enough time at the end to go over the answers.

### 2. Class Activity: Review Answers



**Engage** students in an interactive discussion and review of the answers to each of the exercises.

#### Solution to Student Activity:

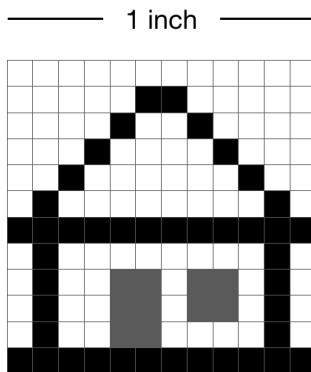
1. An image with higher resolution requires more computer storage.

True

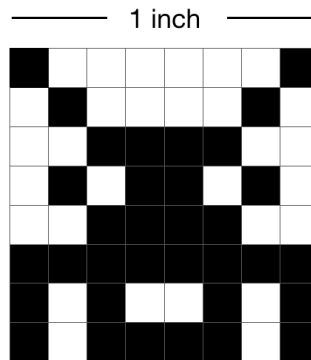
2. Quicksort is a lot faster than selection sort. In fact, it is one of the best sorting algorithms known.

True

3. In reference to image A and Image B?



Width: 12 pixels  
Image A



Width: 8 pixels  
Image B

A. What are the dimensions of image A ?

12 x 12

B. What are the PPI (pixels per inch) for image A?

12 PPI

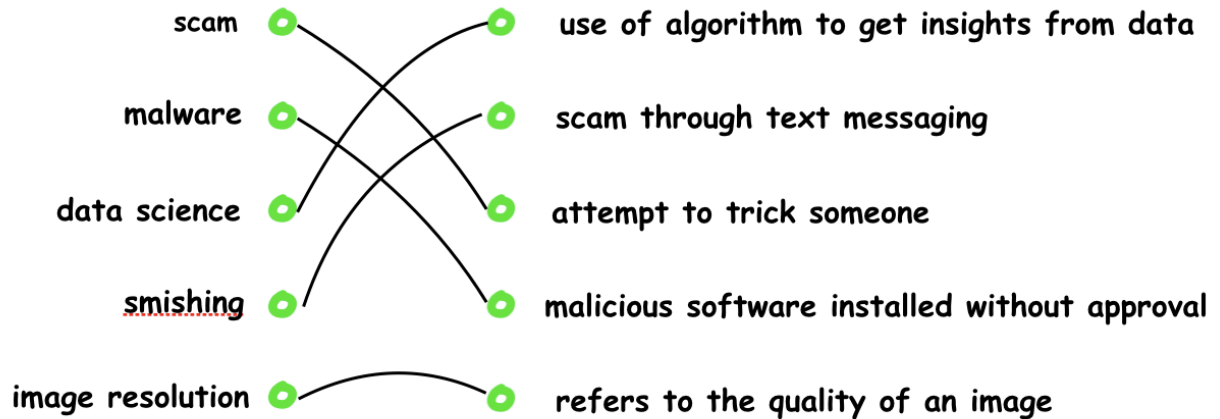
C. What are the PPI (pixels per inch) for image B?

8 PPI

D. Which image has the higher resolution?  Image A

E. Which image requires more bytes (storage) when you save it to a file on your computer? **Image A**

4. Connect the words with a line to the corresponding definition



5.

a) What do you observe about the data in the year 2013?

**Toyota sales were highest followed by honda. Camel sales were significantly lower.**

b) Are Honda sales always larger than Toyota's ? Why or why not?

**No. In 2012 and 2013, Toyota sales were larger.**

c) Based on the data in the chart, **Camel** cars are the most popular.

**False**

d) What is the car sales trend for each car make?

Toyota: **The trend is rising. More are being sold every year.**

Camel: **The trend is falling. Fewer cars are being sold every year.**

e) In 2015 based on the chart, do you think they sold more Camel cars or more Toyota cars? Why?

**More Toyota cars because the trend of sales is rising.**

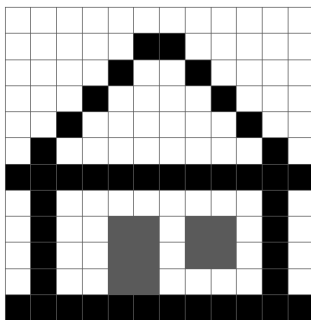
6. Sorting lists helps us find things quickly, and also makes extreme values easy to see.

**True**

### Student Activity: Check Your Knowledge

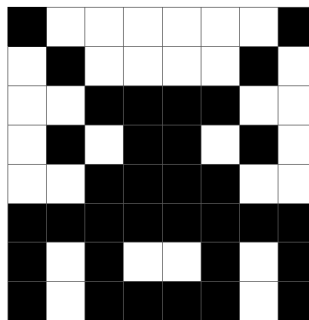
- An image with higher resolution requires more computer storage.
  - True
  - False
  
- Quicksort is a lot faster than selection sort. In fact, it is one of the best sorting algorithms known.
  - True
  - False
  
- In reference to image A and Image B?

\_\_\_\_\_ 1 inch \_\_\_\_\_



Width: 12 pixels  
Image A

\_\_\_\_\_ 1 inch \_\_\_\_\_



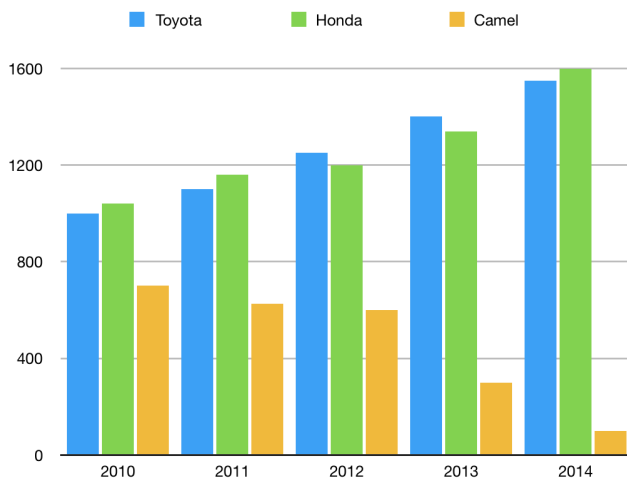
Width: 8 pixels  
Image B

- What are the dimensions of image A? \_\_\_\_\_
- What are the PPI (pixels per inch) for image A?  
\_\_\_\_\_
- What are the PPI (pixels per inch) for image B?  
\_\_\_\_\_
- Which image has the higher resolution? \_\_\_\_\_
- Which image requires more bytes (storage) when you save it to a file on your computer?  
\_\_\_\_\_

4. Connect the words with a line to the corresponding definition

- |                  |   |   |   |
|------------------|---|---|---|
| scam             | ○ | ○ | use of algorithm to get insights from data    |
| malware          | ○ | ○ | scam through text messaging                   |
| data science     | ○ | ○ | attempt to trick someone                      |
| <u>smishing</u>  | ○ | ○ | malicious software installed without approval |
| image resolution | ○ | ○ | refers to the quality of an image             |

5. Given the graph which shows the number of cars sold by make over the course of 5 years, answer the following questions. Explain your answer by referring to the data.



a) What do you observe about the data in the year 2013?

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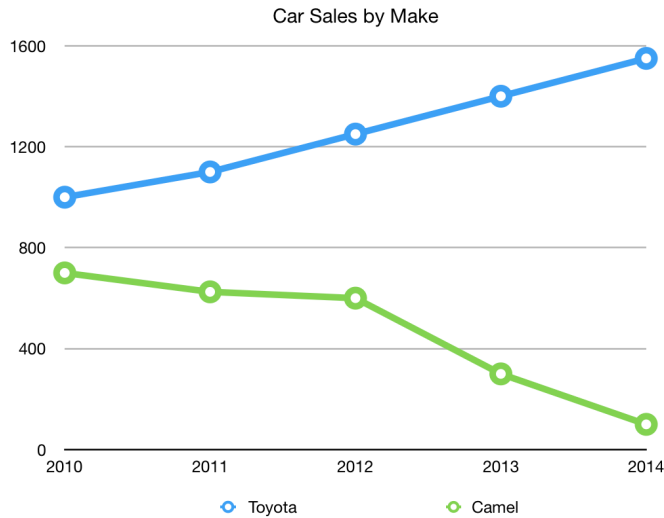
b) Are Honda sales always larger than Toyota's ? Why or why not?

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c) Based on the data in the chart, **Camel** cars are the most popular.

- True  
 False

Next, we have a **line chart** of car sales for Toyota and Camel. Answer these questions based on the data in the chart.



d) What is the car sales trend for each car make?

Toyota: \_\_\_\_\_

Camel: \_\_\_\_\_

e) In 2015 based on the chart, do you think they sold more Camel cars or more Toyota cars? Why?

\_\_\_\_\_

\_\_\_\_\_

6. Sorting lists helps us find things quickly, and also makes extreme values easy to see.

- True
- False