How many bits does it take to represent the values from 0 to 255?
8 (2^^8 = 256)

How many bytes does it take to represent a color in the RGB color model?
3 bytes

How many pixels are in a picture that is 640 pixels wide and 480 pixels high?
307,200

How can you make pink?
RGB: 255-100-255

How can you make yellow?
RGB: 255-255-0

How can you make purple?
RGB: 150-0-255

How can you make white?
RGB: 255-255-255

How can you make dark gray?
RGB: 50-50-50

What is the row index for the top left corner of the picture?
1

What is the column index for the top left corner of the picture?
1

The width of this picture is 640. What is the right-most column index?
640

The height of this picture is 480. What is the bottom-most row index?
480

Does the row index increase from left to right or top to bottom?
left to right

Does the column index increase from left to right or top to bottom?
top to bottom

Set the zoom to 500%. Can you see squares of color? This is called pixelation. Pixelation means displaying a picture so magnified that the individual pixels look like small squares.

Yes

Add a picture to the images folder and then create and explore that picture in the main method. If the picture is very large (for instance, one from a digital camera), you can scale it using the scale method in the Picture class.

```
   //Picture pix = new Picture("kids.jpg");
   Picture p = new Picture("kids.jpg");
   Picture smallP = p.scale(0.25,0.25);
   smallP.write("smallP.jpg");
   smallP.explore();
```

Page 11:

1. Open Picture.java and look for the method getPixels2D. Is it there?

No

2. Open SimplePicture.java and look for the method getPixels2D. Is it there?

Yes

3. Does the following code compile?

DigitalPicture p = new DigitalPicture();

No. DigitalPicture is abstraction.

4. Assuming that a no-argument constructor exists for SimplePicture, would the following code compile?

DigitalPicture p = new SimplePicture();

Yes. DigitalPicture has a SimplePicture.

5. Assuming that a no-argument constructor exists for Picture, does the following code compile?

DigitalPicture p = new Picture();

Yes. DigitalPicture has a Picture

6. Assuming that a no-argument constructor exists for Picture, does the following code compile?

SimplePicture p = new Picture();

Yes. Picture is a SimplePicture

7. Assuming that a no-argument constructor exists for SimplePicture, does the following code compile?

Picture p = new SimplePicture();
No. SimplePicture is not a Picture

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1. How many times would the body of this nested for loop execute?
for (int row = 7; row < 17; row++)
for (int col = 6; col < 15; col++)
10 rows * 9 cols = 90 times

2. How many times would the body of this nested for loop execute?
for (int row = 5; row <= 11; row++)
for (int col = 3; col <= 18; col++)
6 rows * 15 cols = 90 times

Exercise 1:
18410 times