

Graphic Arts
File Resolution Quiz

Name

Key

1. A medium image size photo of 7 x 5 at 300 dpi. Determine the new image size if the photo is used for a yearbook.

Yearbook 330 dpi

$$y = \frac{k}{x}$$

$$7 = \frac{k}{300}$$

$$k = 2100$$

$$y = \frac{2100}{x}$$

$$5 = \frac{k}{300}$$

$$k = 1500$$

$$y = \frac{1500}{x}$$

$$y = \frac{2100}{330}$$

$$y = 6.36$$

$$y = \frac{1500}{330}$$

$$y = 4.54$$

$$\boxed{\text{New size} = 6.3 \times 4.5}$$

2. A low image size photo of 5 x 3 at 300 dpi. Determine the new image size if the photo is used for the web.

Web = 72 dpi

$$y = \frac{k}{x}$$

$$5 = \frac{k}{300}$$

$$k = 1500$$

$$y = \frac{1500}{x}$$

$$3 = \frac{k}{300}$$

$$k = 900$$

$$y = \frac{900}{x}$$

$$y = \frac{1500}{72}$$

$$y = 20.83$$

$$y = \frac{900}{72}$$

$$y = 12.5$$

$$\boxed{\text{New Size } 20.8 \times 12.5}$$

3. Suppose that x and y vary inversely, and $y = 3$ when $x = 8$. Find the inverse model. What is the value of y when $x = 15$?

$$y = \frac{k}{x}$$

$$3 = \frac{k}{8}$$

$$k = 24$$

$$\boxed{y = \frac{24}{x}}$$

$$\boxed{y = \frac{24}{15} \text{ OR } 1.6}$$

4. Determine if the relationship is direct, inverse, or no variation. If it is direct or inverse, write a model.

x	1	2	4	8
y	4	8	16	32

$$k = xy = 4 \quad 16 \quad \text{Not inverse}$$

$$k = \frac{y}{x} = \frac{4}{1} \quad \frac{8}{2} \quad \frac{16}{4} \quad \frac{32}{8} = 4$$

Direct

$$y = 4x$$

5. Determine if the relationship is direct, inverse, or no variation. If it is direct or inverse, write a model.

Volume	210	252	315	420
Pressure	30	25	20	15

$$k = xy = 6300$$

Inverse

$$y = \frac{6300}{x}$$