Name: _____   Points: _____

I.   A ratio is a _____

1. Express each ratio in simplest form.

a) $1.2 \; to \; 2.4$

b) $1\frac{1}{8} \; to \; \frac{3}{8}$

c) $36 cm \; to \; 72 cm$

d) $3 \; in. \; to \; \frac{1}{2} in.$

e) $1 hr \; to \; 15 mins$

f) $7 dollars \; to \; 50 \; cents$

2. Last week, Sarah answered 24 out of 30 questions correctly on her math test. This week she answered 20 out of 24 questions correctly. On which test do you think Sarah have better results? Explain.

II.   A proportion is a _____

1. Show that $\frac{4}{16} = \frac{5}{20}$ is a proportion.

2. Solve each proportion.

$a)$ $\frac{x}{60} = \frac{3}{20}$

b) $\frac{5}{4} = \frac{x}{12}$

c) $\frac{x}{12-x} = \frac{10}{30}$

d) $5 : x + 2 = 4 : x$

III.   Answer the following problems in the space provided.

a) If x varies directly as y, and x= 12 when y=72, find the constant of variation by comparing x to y.

b) If 3 pounds of apples cost $2.75, what is the cost of 15 pounds of apples at the same rate?

c) The owner of a house that is assessed for $12,000 pays $960 in realty taxes. At the same rate, what should be the realty tax on a house assessed for $16,500?