Student Name _____ Date _____

Using Proportions

Use the X rule to determine if the following proportions are equivalent or not:

$$\frac{1}{3} = \frac{12}{36}$$

$$\frac{7}{8} = \frac{22}{24}$$

$$\frac{4}{6} = \frac{14}{21}$$

$$\frac{11}{12} = \frac{44}{46}$$

Use the X Rule to find the unknown number in the following proportions:

$$\frac{2}{3} = \frac{14}{X}$$

$$\frac{9}{13} = \frac{X}{39}$$

$$\frac{7}{8} = \frac{42}{X}$$

$$\frac{12}{17} = \frac{X}{51}$$

Okay, you're ready! Use your knowledge of ratios, proportions and the X rule to solve the following medication word problems:

A 19-year-old female presents to the ER with severe abdominal pain. Blood tests show that she is not pregnant, and likely is suffering from pancreatitis. The doctor instructs you to give her a 7.5 mg dose of Dilaudid via oral (by mouth) liquid. The bottle of Dilaudid that you have in the store room says there is 1.5 mg per mL of liquid. How many mL of the medicine do you need to give the patient?

An internal medicine doctor instructs you to give a 43-year-old male inpatient suffering from a severe infection an initial dose of 1350 mg of the antibiotic Vancomycin. The IV bags of Vancomycin you have in the store room say there is 1500 mg per 1000 mL of fluid. How many mL of fluid will you need to give the patient?