

Name: _____

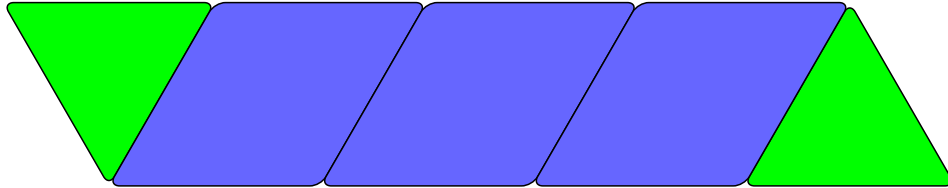
Math 1120

Fraction Patterns Worksheet

Spring 2011

In this worksheet, we investigate fraction patterns. Build the following figures using your “pattern blocks.” In the spaces provided, draw a small illustration of each completed figure. (I’ve done (a) for you, to get you started.)

1. (a) Build a parallelogram that is $\frac{1}{4}$ green and $\frac{3}{4}$ blue.



- (b) Build a trapezoid that is $\frac{1}{2}$ red and $\frac{1}{2}$ blue.

- (c) Build a triangle that is $\frac{2}{3}$ red, $\frac{1}{9}$ green and $\frac{2}{9}$ blue.

- (d) Build a parallelogram that is $\frac{1}{3}$ green and $\frac{2}{3}$ blue.

2. Let's say your small blue pattern block has area equal to $7/12$ square units. (If you're not comfortable with the abstraction here, then choose your own name for a unit of measurement, e.g., "square what-EVERs.") What is the area of each of the figures you made on the previous page? Express your answers as fractions in simplest form, meaning numerator and denominator are relatively prime. Again, I've done the first one for you.

(a) The parallelogram of problem 1(a) has area:

$$3 \cdot \frac{7}{12} + 2 \cdot \frac{7}{24} = \frac{21}{12} + \frac{7}{12} = \frac{28}{12} = \frac{7}{3}.$$

(b) The trapezoid of problem 1(b) has area:

(c) The triangle of problem 1(c) has area:

(d) The parallelogram of problem 1(d) has area: