Name: KEY
Date:

Sec 5.5 – Exploring Ratios

Use the following marbles for the examples below.

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Definitions

1. **Ratios**

   ╱ are a comparison between several values

2. **Part-to-part ratio**

   — a comparison of parts $4:6:2$

3. **Part-to-whole ratio**

   — a comparison of a part to a whole $4:12$

4. **Two-term ratio**

   — a comparison of 2 values

   $4:12 \longrightarrow$ (can be written as a fraction $\frac{4}{12}$)
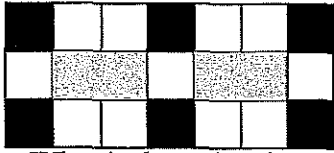
5. **Three-term ratio**

   — a comparison of 3 values

6. **Ratio in lowest terms**

   $4:6:2$
   $2:3:1$ lowest terms

Practice

1. Use the design to help answer the following questions.

   a) What is the ratio of grey tiles to total tiles? Express the answer in three different ways.

   $$4:21 \qquad \frac{4}{21} \qquad 4 \text{ to } 21$$

   b) What could the ratio 4:6 represent?

   grey tiles : black tiles (part to part)

   c) What is the ratio of grey to black to white tiles?

   $$4:6:11 \qquad \text{part to part to part.}$$
   (3 term ratio)

2. A recipe for trail mix calls for three cups of mini pretzels, two cups of roasted soy chips, one cup of raisins, and one cup of sunflower seeds. You make two batches of trail mix.

   a) What is the ratio of mini pretzels to raisins? Express the ratio in two different ways.

   $$3 : 2 : 1 : 1$$
   $$6 : 4 : 2 : 2$$

   b) What is the ratio of roasted soy chips to sunflower seeds?

   $$2 : 1$$

   c) How many cups of mix do two batches make?

   $$6 : 4 : 2 : 2$$
   $$(2) \qquad (4) \qquad (14 \text{ cups})$$

   d) What is the ratio of soy chips and sunflower seeds to total trail mix? Express the ratio as a fraction, a decimal, and a percent.

   $$6 : 14$$
   $$3 : 7 \qquad \frac{3}{7} \times 100 = \underline{43\%}$$