

On which cards is the ratio of trucks to boxes the same?

Figure 11.6

Blackline Masters 12 and 13 for use with Activity 11.6.

Three Groups and an Odd Ball

Rectangle Group 1 (Label of each)	Measure in cm		Ratio of sides (Simplifying)
	Long side	Short side	

Rectangle Group 2 (Label of each)	Measure in cm		Ratio of sides (Simplifying)
	Long side	Short side	

Rectangle Group 3 (Label of each)	Measure in cm		Ratio of sides (Simplifying)
	Long side	Short side	

Odd Ball (Label of each)	Measure in cm		Ratio of sides (Simplifying)
	Long side	Short side	

Standards for Mathematical Practice

3 Construct viable arguments and critique the reasoning of others

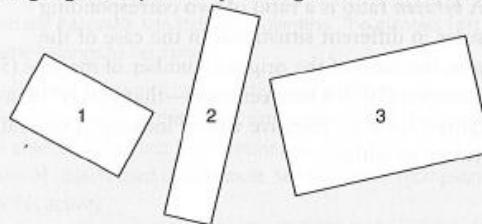
When students have decided on their groupings, stop and discuss the reasons why they classified the rectangles as they did. Be prepared for some students to try to match sides or look for rectangles that have the same amount of difference between the sides. Encourage students to critique the explanations given. Next, have the students measure and record the sides of each rectangle to the nearest half centimeter with Blackline Master 13. Discuss the results and ask students to offer explanations of how the ratios and groupings are related. If the groups are formed of proportional (similar) rectangles, the ratios within each group will be equivalent. Students with disabilities may need to have examples of one rectangle from each grouping as a starting point.

Activity 11.6 LOOK-ALIKE RECTANGLES



Provide students with copies of Blackline Masters 12 and 13 (Figure 11.6) and have them cut out the 10 rectangles. Three of the rectangles (A, I, and D) have sides in the ratio of 3 to 4. Rectangles C, F, and H have sides in the ratio of 5 to 8. Rectangles J, E, and G have sides in the ratio of 1 to 3. Rectangle B is a square, so its sides are in the ratio of 1 to 1.

Ask students to group the rectangles into three sets that “look alike.” If your students know the word *similar* from geometry, use that term. To explain what “look alike” means, draw three rectangles on the board with two that are similar and one that is clearly dissimilar, as in the following example. Have students use their language to explain why rectangles 1 and 3 are alike.



From Van de Walle et. al. (2014). *Teaching Student-Centered Mathematics Grades: Developmentally Appropriate Instruction for Grades 6 – 8 (2nd Ed.)*. Toronto: Pearson Education, Inc. (p. 208).