Name_____

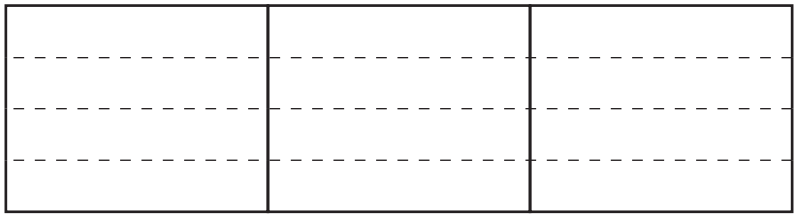
BUILDING A BETTER BIKE

Choosing a Factory

You need to decide between two different factories to manufacture your bike. Each factory makes the tubing in long pieces that are later cut to size. You will need to compare the lengths to the amount you need so that you can decide which factory will have the least amount of wasted material.

Factory A

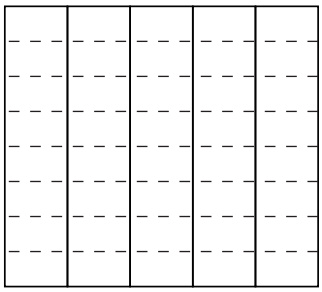
At Factory A, your top tube will take $\frac{1}{3}$ of a piece of tubing and your seat tube will take $\frac{5}{12}$ of a piece. What fraction of one piece of tubing is used to make a top tube and a seat tube? Use a visual fraction model such as an area model or a bar diagram to explain your answer.

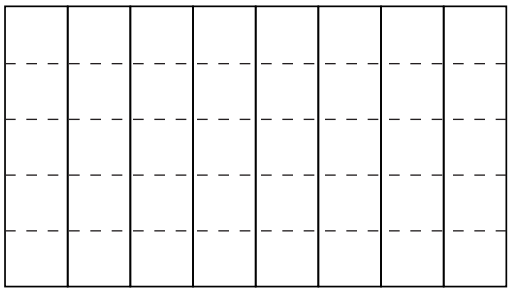


Use equivalent fractions to determine what fraction of the tubing will be left over. Show or explain how you found the answer.

Factory B

At Factory B, your top tube will take $\frac{2}{5}$ of a piece of tubing and your seat tube will take $\frac{3}{8}$ of a piece. What fraction of one piece of tubing is used to make a top tube and a seat tube? Use a visual fraction model such as an area model or a bar diagram to explain your answer.





Use equivalent fractions to determine what fraction of the tubing will be left over. Show or explain how you found your answer.

Use equivalent fractions to determine the difference in the amount of waste at the two factories. Show or explain how you found the answer.

Explain which factory you will use to make your bike and why.

