

Name: _____

Crossing the River



A group of eight adults and two children need to cross a river. They have a small boat that can hold either 1 adult **OR** 1 child **OR** 2 children.

1. How many one-way trips does it take for all 8 adults and 2 children to cross the river? **Show or explain how you got them all across.**

2. How many one-way trips would it take to get the following groups across the river?

Show or explain how you got them all across.

a. 6 adults and 2 children

b. 15 adults and 2 children

c. 3 adults and 2 children

3. How many trips would it take to get 100 adults and 2 children across the river?
Describe (use words!) how you found your answer.

4. Write a rule for finding the number of trips needed to get any number of adults (A) and 2 children across the river. Label each part of the rule including the **variables** and **coefficients**.

5. It takes 41 trips to get all the adults and the 2 children across the river. How many adults were in the group? **Show your work or explain how you know!**

6. What happens to your rule for finding the number of trips if there are a different number of children? For example: 8 adults and 3 children or 2 adults and 5 children?

7. Write a rule for finding the number of trips needed to get any number of adults (A) and any number of children (C) across the river. Label each part of the rule including the **variables** and **coefficients**.

8. One group of adults and children took 27 trips.
- How many adults and children were in the group?
 - Is there more than one solution to this question?
 - If so, what rule fits each solution?