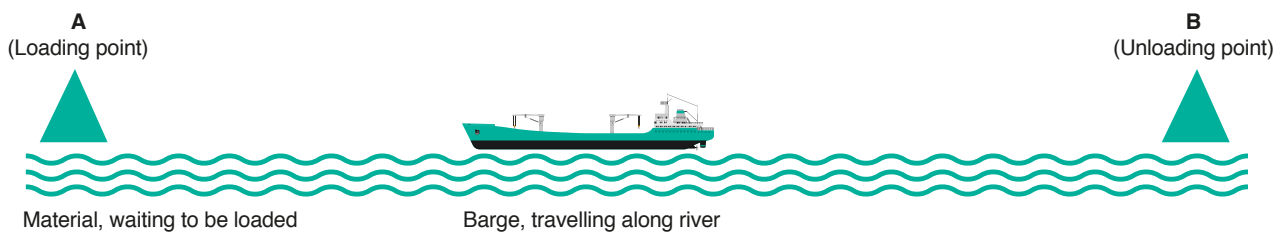


# MORE BY RIVER

## Introduction

Each contractor needs to be able to ship material from point A to point B. The material arrives at A in loads of 1000 tons each hour and needs to be shipped to B asap. It can be stored at A temporarily but there is a charge per ton per hour after the first hour.

The river is tidal and at low tide only smaller boats can use it. Remember that low tide occurs at different times each day.



**The Acme Boating Company** is going to use four boats, each of which can carry 1000 tons. Each takes three hours to load, get the material from A to B, unload and return. Their boats can operate at high and mid tide but not at low tide so cannot travel for six out of the 24 hours in a day.



**The Big Boat Brigade** is proposing using one boat, which can carry four thousand eight hundred tons. It can also do the round trip in three hours but this larger vessel cannot sail for eight out the 24 hours in a day. The boat needs more crew than the Acme boats, but not four times as many.



**Charlie's Clever Carriers** is proposing using smaller boats, which can operate even at low tide, but each one only carries 500 tons. Being smaller and lighter they can do the round trip in two hours. Charlie (short for Charlotte) has four such boats.

