

CANAL MATH PROBLEMS

Problem #1

You are the proud owner of the canal boat George Washington. You are about to make the trip from Middletown to Reading on the Union Canal with a full load of 80 tons of goods. You have decided to take bricks, corn, salt and oats as your cargo.

You want to take 10 tons of bricks, 30 tons of corn (in bushels), 20 tons on salt (in bushels) and 20 tons of oats (in bushels). **How many of each will you need?**

| | |
|--|---------------------------|
| | bricks = 10 tons |
| | bushels of corn = 30 tons |
| | bushels of salt = 20 tons |
| | bushels of oats = 20 tons |

| | | | |
|--|-------------------------|-------------------------|-------------------------|
| <i>Here is a chart that will help you:</i> | | | |
| 500 bricks = 1 ton | 40 bushels/corn = 1 ton | 45 bushels/salt = 1 ton | 80 bushels/oats = 1 ton |

Problem #2

You have decided to go by packet boat (a canal boat that carried passengers) from Philadelphia to Middletown. The distance is approximately 150 miles. A packet boat traveled about 4 miles per hour.

If it traveled twelve hours per day, how many miles could you go in a day? _____

How many days would it take for you to make your trip? _____

The charge was 5¢ a mile (including food). How much would it cost you for the trip? _____

Is there a train from Middletown to Philadelphia now? _____

If yes, how much does it cost for a one-way ticket? _____

If not, where would you go to take a train to Philadelphia? _____

How much would a one-way ticket cost? _____

Problem #3

Mules pulling the boats on the towpath worked for six hours at a time, and then a fresh team would be exchanged with them and the new team would work 6 hours. Mules pulling the heavily-loaded freight boats went 3 miles per hour. The Union Canal was about 80 miles long from Reading to Middletown. How many times did you have to change mule teams when you went the whole length of the canal? _____

CANAL MATH ANSWER SHEET

Problem #1

- 5,000 - Bricks
- 1200 - Bushels Corn
- 900 -Bushels Salt
- 1600 - Bushels Oats

Problem #2

- 48 miles/day
- About 3 1/4 days
- \$7.50
- Students will have to research this by calling Amtrak at 1-800-872-7245 or visiting their website at www.amtrak.com.
You can take such a train. There are 9 trains per day.
It costs \$18.00 one-way and takes less than 2 hours.

Problem #3

At 3 mi./hr. the trip took 26.6 hours.
You'd thus have to change mules 5 times, but your fifth team would be really fresh.