# Lesson Plan - Transportation Math

<table>
<thead>
<tr>
<th>Learning elements</th>
<th>Numbers, Addition, Subtraction, Multiplication, Division, Fractions, Time, Money, Area, Thinking, Relationships</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contributes to these Educational Standards</td>
<td>Math, New Tech, Reading, Relationships, Safety</td>
</tr>
<tr>
<td>Supports these CRLs</td>
<td>Critical Thinking, Problem Solving</td>
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<tr>
<td>Learning Environment requirements:</td>
<td>Central focus space to set the stage. Individual work space to perform the math calculations. Flip chart, blackboard or overhead device to demonstrate example math problem. One copy of Story Problem Hints, and Transportation Math exercises per learner.</td>
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<tr>
<td>Introduction</td>
<td>Trucks carry many different products to many different places. Almost everything we buy has been delivered by truck to a store or to our homes. We will apply the math we have learned by solving story problems involving truck drivers and the math they encounter in their daily work. We will solve some math puzzles and riddles also.</td>
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<tr>
<td>Objective</td>
<td>Time (minutes)</td>
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<tr>
<td>--------------------------------------------------------------------------</td>
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<tr>
<td>#1 Solve addition, subtraction, multiplication and division math problems, using transportation examples.</td>
<td>6 min</td>
</tr>
<tr>
<td>#2 Use math symbols +, -, x, ÷, ≥, ≤, =</td>
<td>3 min</td>
</tr>
<tr>
<td>#3 Add fractions and whole numbers</td>
<td>3 min</td>
</tr>
<tr>
<td>#4 Solve a story problem using decimals</td>
<td>3 min</td>
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<tr>
<td>#5 Solve a story problem with time elements; calculate time elapsed.</td>
<td>4 min</td>
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<tr>
<td>#6 Calculate area via a board feet of lumber example</td>
<td>4 min</td>
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<tr>
<td>#7 Solve a math riddle, using transportation examples.</td>
<td>10 min</td>
</tr>
<tr>
<td>Wrap-up</td>
<td>2 min</td>
</tr>
<tr>
<td>Total:</td>
<td>35 min</td>
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</tbody>
</table>
1.) Truck driver Jon loaded 1800 crates into his semi truck. Later, he loaded 1700 more crates. The next day, he removed 1500 crates. How many crates are left in Jon’s truck? Please write the equation that is used to solve this problem.

2.) Truck driver Brent delivers cement. Today, he delivers \( \frac{1}{2} \) of his load 2.5 miles from here he started. He drove another 4.7 miles, and delivered \( \frac{1}{4} \) of his load there. Then he traveled another 6.75 miles to deliver the final \( \frac{1}{4} \) of his load. How many miles did Brent travel to deliver his loads and get back home again? Please write the equation that is used to solve this problem.

3.) Truck driver Alicia loaded four boxes into her truck. One box weighed 1472.5 lbs., another weighed 675.2 lbs., another weighed 450 lbs., and the other weighed 775.8 lbs. What was the weight of her total load?

4.) Truck driver David drove 120 pallets of tennis shoes to a department store. The next day, he took 75 of those pallets from the department store and drove them to a variety store. How many pallets of tennis shoes remain at the department store? Please write the equation that is used to solve this problem.

5.) Truck driver Tommy delivered four million oranges to a company that makes orange juice. Assuming it takes sixteen oranges to make 8 oz. of orange juice, how many gallons of orange juice can be made from the four million oranges delivered?
6.) Math riddle: Truck driver Chris delivers 250 crates of soda pop three times each month. Truck driver Pat delivers 200 crates of soda pop four times a month. Alicia delivers as much soda pop as Chris and Pat combined, plus 50 more crates. Jerry delivers \( \frac{1}{4} \) the amount of soda pop at Alicia. The value of Jerry’s crates is $5.00 per crate. What is the total value of Jerry’s load of soda pop?

7.) Tanker truck driver Pedro delivers \( \frac{3}{4} \) tank of milk to the cheese factory. He delivers \( \frac{1}{3} \) of a tank of milk to a small dairy, and \( \frac{2}{3} \) of a tank of milk to a larger dairy. The next day, Pedro drives two full tanks of milk to the larger dairy. How many tanks of milk did Pedro deliver?

8.) Will delivers 32,000 board feet of lumber to a lumber company on Monday. If the load is made up of 4’ 2x4’ boards, how many boards are on the truck? Please write the equation that is used to solve this problem.

9.) Tanker truck driver Ruth delivers 600 gallons of glue each day. She starts her day at 8:00 a.m. It takes Ruth 15 minutes to perform the safety pre-checks on her truck. It takes her 75 minutes to load the truck and get on the road. Ruth drives three hours and 20 minutes to reach her destination. Ruth takes an hour for lunch and rest periods throughout the day. What time does Ruth return home?
Story Problems Tips:

Look for these key words to help decide whether to add, subtract, multiply, or divide:

**ADDITION**
- Sum
- All
- Together
- Total
- In all
- Altogether

**SUBTRACTION**
- Difference
- Left
- Less than
- Fewer than
- Greater than
- More than
- How many more?
- How many less?

**MULTIPLICATION**
- Product
- In all
- Times
- All
- If each one costs $5, how much will 10 cost?

**DIVISION**
- Quotient
- Each
- Divide equally
- Per
- Average
- If 10 cost $50, how much will one cost?

Draw a picture as you read the story. For example, if a truck driver loads 35 boxes into the truck, then delivers 20 of them, how many boxes are still in the truck?

![Grid drawing of boxes]

35 boxes

![Grid drawing of boxes]

35-20

15 boxes are still in the truck...

Adapted from *Teaching Thinking and Problem Solving in Math* by Char Forsten (Scholastic Professional Book, 1992)

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