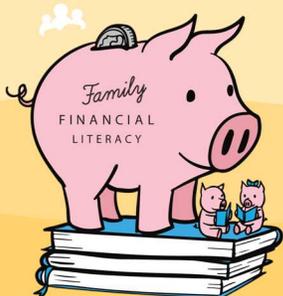


Financial Literacy: Math Activities
***The Trumpet of the Swan* (1970)**
by E. B. White

1. **Hatching Trumpeter Swan Eggs** (Chapter 1) – On page 6, we learn that it takes 35 days for trumpeter swan eggs to hatch. That is called the incubation period.
 - How many weeks is 35 days?
 - How many hours are in 35 days?
 - Look at a calendar. What day will it be 35 days from now?

Different bird species have different incubation periods and lay a different number of eggs (the clutch size). Use the *Hatching an Egg* worksheets to collect and analyze egg data for several different species of birds.

2. **Trumpeter Swan Nests** (Chapter 2) – On page 16, we learn that trumpeter swan nests are 6 feet across. That measurement is called the diameter.
 - How many inches in diameter is a trumpeter swan nest?
 - How many yards in diameter is a trumpeter swan nest?
 - If you know the diameter of a circle, you can figure out the measurement all the way around, or the circumference, by multiplying the diameter by π , or 3.14. Calculate the circumference of the trumpeter swan nest.
 - If you know the diameter of a circle, you can figure out the radius, which is equal to half the diameter. What is the radius of a trumpeter swan nest?
 - If you know the radius (r) of a circle, you can figure out the area of that circle. Here is the formula: $\text{Area} = \pi * r^2$. Figure out the area of the trumpeter swan nest.
3. **Trumpeter Swan Eggs** (Chapter 3) – On page 22, we learn that Louis' mother laid 5 eggs, and each egg was 5 inches long.
 - If you laid the eggs end to end, how long would the row of eggs be?
 - If you had twice as many eggs, how long would the row be?
 - How many eggs would it take to make a row that was 50 inches long?



4. **Baby Feeding** (Chapter 3) – On page 26, the teacher proposes this math problem:

“If you are feeding a baby from a bottle, and you give the baby eight ounces of milk in one feeding, how many ounces of milk would the baby drink in two feedings?”

- This math problem assumes that the baby will drink the same amount of milk in each of two feedings. If that is the case, what is the answer?
- What if the baby is still full from the first feeding and only drinks half as much milk in the second feeding?
- What if the baby is extra hungry for the second feeding and drinks twice as much milk in the second feeding?
- Convert your answers from ounces to cups.

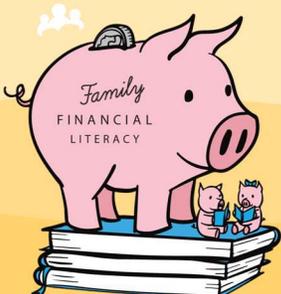
5. **A Man Goes for a Walk** (Chapter 7) – On page 75, Sam is presented with this math problem at school:

“Sam, if a man can walk three miles in one hour, how many miles can he walk in four hours?”

Sam comments that it depends on the pace the man has for the remaining hours. He might get tired and not be able to walk as fast. So, let’s make some assumptions about the man’s pace for the remaining three hours.

- Assume he maintains his pace and walks three miles per hour for the remaining three hours. How many miles does he walk in total?
- Assume he walks at half his first hour pace for the remaining three hours. How many miles does he walk in total?
- Assume he walks at a decreasing pace over the four hours. So, he walks:

Hour #1	3 miles
Hour #2 ½ the pace of Hour #1	
Hour #3 ½ the pace of Hour #2	
Hour #4 ½ the pace of Hour #3	
Total	



6. **Swan Boat Rides** (Chapter 14) – On page 141, we learn that the Swan Boat rides cost 25¢ for adults and 15¢ for children. According to the Swan Boat website, the boat can hold 20 people. Let's make some assumptions about who is riding the boat and see how much money the swan boat operator will collect.

- Assume that the boat has half of the seats filled with adults and half filled with children. How much money will the swan boat operator collect for one ride?
- Assume the swan boat makes 10 trips each day. How much money will the swan boat operator collect in one day? If he has 10 trips each day for a week, how much money will he collect in a week?
- Assume that having Louis play his trumpet doubles the number of trips the swan boat operator makes in one day. How many trips will he make each day now? How much money will he collect in one day? How much money will he collect in a week? Will the extra trips cover the \$100 cost of having Louis play his trumpet?

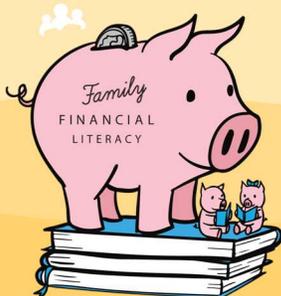
Now let's change the assumption about the number of adults and the number of children and see what happens to the answers.

- Assume that the boat has one-fourth of the seats filled with adults and three-fourths of the seats filled with children. How much money will the swan boat operator collect for one ride?
- Assume the swan boat makes 10 trips each day. How much money will the swan boat operator collect in one day? If he has 10 trips each day for a week, how much money will he collect in a week?
- Assume that having Louis play his trumpet doubles the number of trips the swan boat operator makes in one day. How many trips will he make each day now? How much money will he collect in one day? How much money will he collect in a week? Will the extra trips cover the \$100 cost of having Louis play his trumpet?

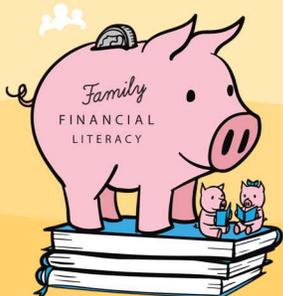
Now, instead of assuming that Louis and his trumpet will double the number of trips, assume it will triple the number of trips.

- How much money would the swan boat operator collect in a week with $\frac{1}{2}$ the seats filled with adults and $\frac{1}{2}$ with children, after Louis triples the number of trips?
- How much money would the swan boat operator collect in a week with $\frac{1}{4}$ of the seats filled with adults and $\frac{3}{4}$ of the seats filled with children, after Louis triples the number of trips?

For more fun with Swan Boat rides, see the *Swan Boat Operator* worksheets.



7. **Watercress Sandwiches at the Ritz** (Chapter 15) – On page 160, Louis orders some dinner at the Ritz. He orders 12 watercress sandwiches for \$18.
- How much does each watercress sandwich cost?
 - How much would it have cost if he had ordered twice as many watercress sandwiches?
 - How much would it have cost if he had ordered half as many watercress sandwiches?
8. **Playing for the Swan Boat** (Chapter 16) – On page 166, Louis is paid \$100 for one week of work with the Swan Boat.
- If he was paid \$100 for the week, how much did he make each day? Round your answer to the nearest dollar.
 - Assuming that he worked 7 hours each day, how much did he make in an hour?
9. **Paying the Agent in Philadelphia** (Chapter 17) – Louis plays his trumpet in the nightclub in Philadelphia for \$500 per week (p. 178). He plays for 10 weeks.
- How much money does he earn from playing his trumpet for 10 weeks?
- Louis had to pay his agent 10% of his earnings for getting the job for Louis. *Percent* means per 100, so for every \$100 Louis was paid, he had to pay \$10 to his agent.
- How much did Louis have to pay his agent each week?
- Net pay* is the amount of money Louis had left over after he paid his agent.
- What was Louis' net pay each week?
- See the *Paying the Agent in Philadelphia* worksheet for help with these calculations.



10. **“It’s a lot of money for a bird.”** (Chapter 19) – On page 216, Sam gives an accounting of Louis’ money. Some of the items on the list are *income*, or money that Louis earned with his trumpet. Other items are *costs*, things that Louis paid for with his money. Identify which items are income and which are costs. Then, see if you can replicate Sam’s calculation. See the *A Lot of Money for a Bird* worksheet for help.
11. **Plane fare for Sam** (Chapter 19) – Louis uses some of the money from his money bag to pay for Sam’s airfare to fly from Montana to Philadelphia and back again.
- Before he pays for the airfare, how much money does he have in his money bag? (See your grand total from the chart above, or check page 216 in the book.)
 - After he pays for Sam’s airfare, he will have \$4,420.78
 - How much is Sam’s round-trip airfare from Montana to Philadelphia?
 - How much would a one-way ticket cost, assuming that it is half the round-trip fare?
12. **Money for Charity** (Chapter 20) – On page 238, the music store owner decides that he is only going to keep the money to cover the cost of the stolen trumpet and the damage to his store. He is going to give the rest of the money to the Audubon Society.
- After paying for Sam’s airfare, the money bag has \$4,420.78. The store owner owed \$900 for the cost of the trumpet and the damage to the store. How much money will the store owner donate to the Audubon Society?

