

## **Math- Research Cruise Word Problems**

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### **OBJECTIVES**

1. Students will learn about life onboard the NOAA Research Vessel Ronald H. Brown and practice basic arithmetic by completing word problems.
2. Students will practice basic arithmetic by creating word problems relating to their school or home.

### **AGE**

Grades 5-8

### **TIME ALLOWANCE**

1 hour

### **MATERIALS**

Copies of word problem handout for each student

### **INSTRUCTION:**

1. Students should already have had some exposure to word problems. Teacher can reintroduce this concept, or jump right into the lesson. Hand out the word problems to each student to complete individually.
2. Remind the students to check their answers as they are working on them, and again when they are done. Do they make sense given the question that is being asked? It is important for students to *think* about math and the answers they expect, rather than just plug in numbers and circle an answer.
3. After students have completed the attached handout, they should hand write a list of supplies that the ship needs for future cruises of similar length. This will force the student to check their answers again from a common sense standpoint.
4. For homework, have each student write 3 word problems based on their school or home. There is a large opportunity for variation among student responses. This is an opportunity for students to think about the environments they are in, while converting some of those familiar environments into numerical terms.

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### **EVALUATION / ASSESSMENT**

Students will be assessed on successful completion of the word problems and successful writing of 3 word problems of their own creation. It is important to check that the student-written problems include enough information that a third party could answer the question.

Name: \_\_\_\_\_

## Research Cruise Word Problems

### Student Handout

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1. If the Ronald H. Brown traveled at 15 miles per hour, 24 hours a day, for 32 days, how far would it go?
2. The Ronald H. Brown research vessel has 57 people onboard. Each person is either part of the Scientific Party or part of the Crew. If there are 25 people in the Scientific Party, how many crewmembers are there on the ship?
3. What percent of people on the ship are Crew?
4. There are 57 people on the ship. Nine are women. How many men are on the ship?
5. What percent of people on the ship are women?

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6. The women on the ship like to drink a lot of water- 5 glasses a day. The men only drink 3 glasses a day. If the ship is at sea for 32 days, what is the minimum amount of drinking water it needs to keep everyone's thirst quenched?
7. Everyone on the ship loves to receive email from their family and friends. If the average person sends 423kb of data each day, how many kb of email is sent off the ship after 32 days?
8. Fire drills are done once a week on the ship. Abandon ship drills are done once a week on the ship. Man overboard drills are done once a month on the ship. If the ship is at sea for exactly one month, how many drills will there be?
9. There are 57 people on the ship. Two-thirds of the people like to eat salad with their dinner. Each salad contains one-eighth of a head of lettuce. How many head of lettuce should the cook prepare each day?

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10. If one knot equals 0.87 miles per hour, and the ship is traveling at 13 knots, how many miles per hour is the ship traveling?

In the space below, write 3 word problems using numerical data from your home or school. Be sure to solve the problem, showing your work.

1.

2.

3.