



# Thanksgiving Math Challenge!

Practical Math for the Holiday

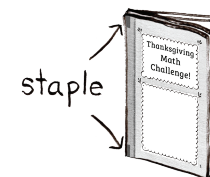
Practice practical math skills this Thanksgiving with real-world meal budgeting, recipe scaling, and holiday travel planning!

## Supplies

- printer
- paper
- pencil
- crayons or colored pencils
- stapler

## Getting Ready

- **Print** the Thanksgiving Math Challenge! (double-sided, landscape orientation, flip on short edge).
- Have your students **fold** the pages in half so the cover is on the front and back.
- **Check** that the page numbers are in order.
- **Staple** the booklet at the top and bottom of the folded edge in the *dark rectangles*.
- Have students **answer the questions** as they apply practical math to their holiday!



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REV0926



## My Thanksgiving

Tasty foods: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

We ate with \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_



I helped by \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Next Thanksgiving, I can \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

I am thankful for:

# Thanksgiving Math Challenge!

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

Date: \_\_\_\_\_

State: \_\_\_\_\_



Favorite Thanksgiving Foods:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# Thanksgiving Dinner Budget

Making a plan *before* you go shopping helps you stay within your budget. Let's figure out how to plan a tasty Thanksgiving meal for \$50 altogether.

## A) Plan your \$50 meal:

1. Mark the circle for each item you plan to buy.
2. Choose *at least one* item from each rectangle.

*Note: Be sure to use a pencil so you can easily erase any changes or mistakes!*



|                       |               |                       |               |             |             |
|-----------------------|---------------|-----------------------|---------------|-------------|-------------|
| <input type="radio"/> | 18 lb. turkey | <input type="radio"/> | 24 lb. turkey | <b>\$12</b> | <b>\$16</b> |
|-----------------------|---------------|-----------------------|---------------|-------------|-------------|

|                       |              |                       |                 |            |            |
|-----------------------|--------------|-----------------------|-----------------|------------|------------|
| <input type="radio"/> | stuffing     | <input type="radio"/> | mashed potatoes | <b>\$2</b> | <b>\$4</b> |
| <input type="radio"/> | red potatoes | <input type="radio"/> | sweet potatoes  | <b>\$5</b> | <b>\$3</b> |

|                       |             |                       |              |            |            |
|-----------------------|-------------|-----------------------|--------------|------------|------------|
| <input type="radio"/> | green beans | <input type="radio"/> | corn         | <b>\$5</b> | <b>\$6</b> |
| <input type="radio"/> | peas        | <input type="radio"/> | carrots      | <b>\$4</b> | <b>\$2</b> |
| <input type="radio"/> | blueberries | <input type="radio"/> | baked apples | <b>\$3</b> | <b>\$4</b> |

|                       |              |                       |                 |            |            |
|-----------------------|--------------|-----------------------|-----------------|------------|------------|
| <input type="radio"/> | turkey gravy | <input type="radio"/> | cranberry sauce | <b>\$6</b> | <b>\$3</b> |
|-----------------------|--------------|-----------------------|-----------------|------------|------------|

|                       |              |                       |           |            |             |
|-----------------------|--------------|-----------------------|-----------|------------|-------------|
| <input type="radio"/> | dinner rolls | <input type="radio"/> | cornbread | <b>\$6</b> | <b>\$12</b> |
|-----------------------|--------------|-----------------------|-----------|------------|-------------|



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## Cranberry Sauce Recipe

Homemade cranberry sauce is delicious! Now you can make it at home (with adult supervision)!

### Step 1: Prep Ingredients (5 minutes)

- Rinse cranberries (fresh or frozen) and remove soft ones.
- Optional: add chopped orange. Peel it, remove seeds, and chop the fruit.

### Step 2: Cook the Cranberry Sauce (10-15 minutes)

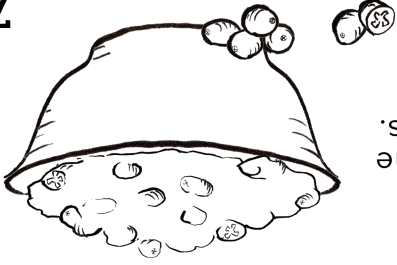
- In a medium saucepan, mix orange juice, water, sugar, and cranberries. Do not cover.
- Over medium-high heat, bring to a boil.
- Reduce heat and simmer, stirring occasionally. Cranberries will begin to split open.
- Optional: Stir in cinnamon, ginger, nutmeg, and chopped orange.
- When most cranberries have split open (about 10 minutes), stir and remove from heat. Sauce will thicken as it cools.

### Step 3: Cool, and Mash or Blend

- Allow sauce to cool in saucepan for a few minutes.
- If you like your cranberry sauce:
  - chunky: do nothing, it is already chunky!
  - less chunky: mash it with a potato masher
  - smoother: cool longer, then blend it with an immersion blender or food processor

### Step 4: Chill and Store

- Pour cranberry sauce into a container, cover, and chill in the refrigerator for at least 6 hours.
- Serve chilled.
- Store in the refrigerator.



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# Food Fractions!

How can we change a recipe so it makes less or more food? Let's practice our fraction skills by halving (cutting in half) and doubling (making twice as much) with this recipe.



Write the halved amounts (exactly half) of every ingredient in this first column.



Write the doubled amounts (2 times) of every ingredient in this last column.

| Halved                                        | Cranberry Sauce Ingredients                                   | Doubled |
|-----------------------------------------------|---------------------------------------------------------------|---------|
|                                               | makes $2\frac{1}{4}$ cups of sauce                            |         |
|                                               | $\frac{1}{2}$ cup orange juice                                |         |
|                                               | $\frac{1}{2}$ cup water                                       |         |
|                                               | $\frac{2}{3}$ cup sugar                                       |         |
|                                               | 4 cups cranberries (a 12 oz. package)                         |         |
| <b>Optional</b> (add some or all if you want) |                                                               |         |
|                                               | $\frac{1}{8}$ tsp. ground spices: cinnamon, ginger, or nutmeg |         |
|                                               | 1 orange, peeled and chopped                                  |         |

## B) Make your budget:

1. Write each item you chose and its price (remember to use a pencil).
2. Add them all up.

|              | Item | Price |
|--------------|------|-------|
| 1            |      |       |
| 2            |      |       |
| 3            |      |       |
| 4            |      |       |
| 5            |      |       |
| 6            |      |       |
| 7            |      |       |
| 8            |      |       |
| 9            |      |       |
| 10           |      |       |
| 11           |      |       |
| 12           |      |       |
| <b>Total</b> |      |       |

\$50 -  = \$\_\_\_\_\_ your change

## C) Check your budget:

1. **Check:** Did you spend \$50 or less? Did you choose at least one item from each rectangle? If not, what do you need to put back? What else do you need to buy?
2. **Correct** your budget and add it up again.
3. **Reflection:** How can you apply what you learned here to a shopping trip at a real store?

# Thanksgiving Travel Plans

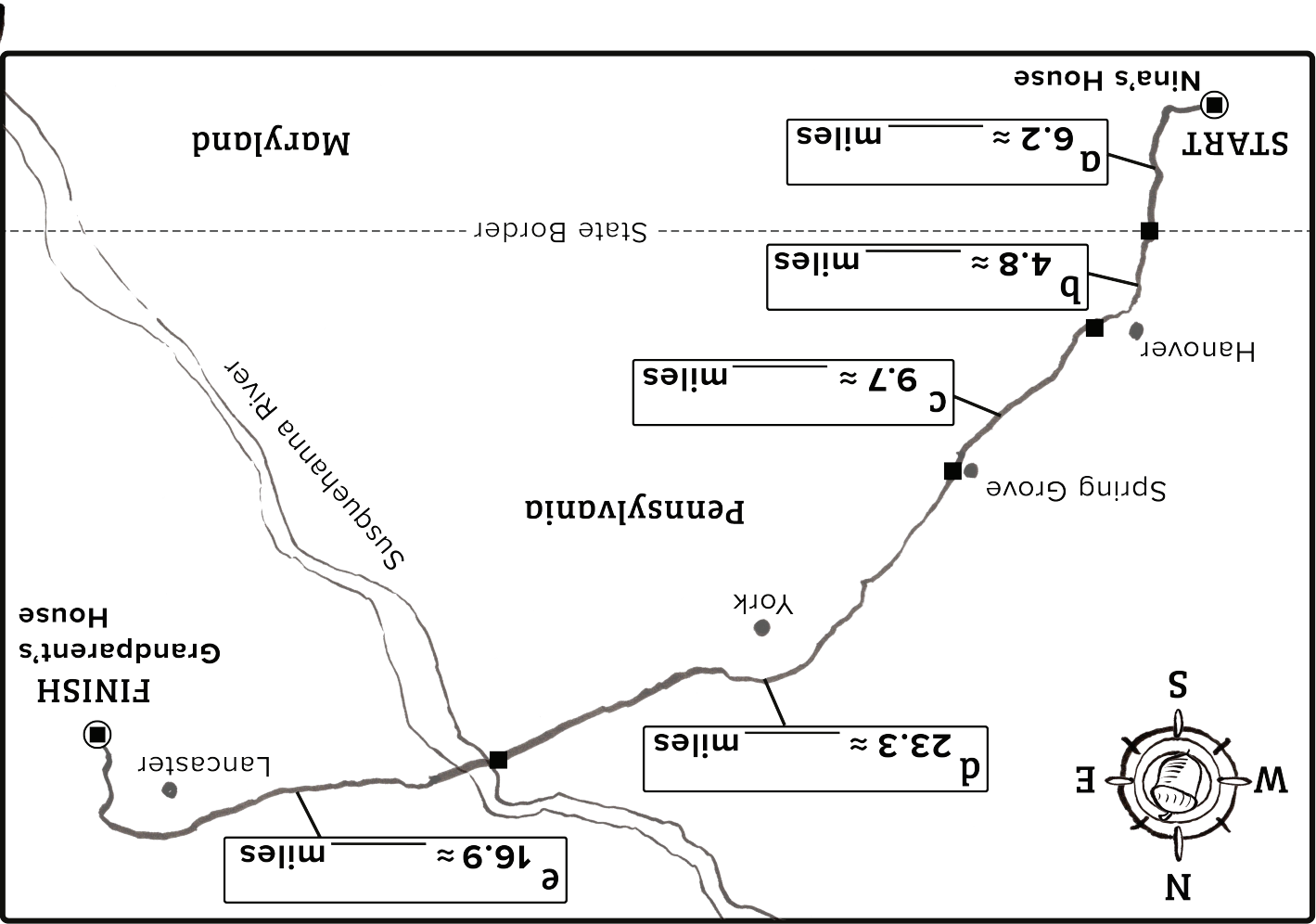
Make travel days go smoothly by planning ahead and calculating how far you will be traveling.

Nina is excited to visit her grandparents for Thanksgiving! Use the map to help her calculate how far her family needs to drive.

## A) Rounding Miles

In the US, distances are often given in miles. Rounding distances before calculating makes addition easier and gives us a reasonable estimate. For example, 12.8 miles rounds up to 13 miles.

- Round the miles given for each segment (between black squares) on the map up or down to a whole number. (Example: 3.5 rounds up to 4 and 7.2 rounds down to 7.)
- Write each rounded number on the blank, using a pencil. (Note:  $\approx$  means approximately)



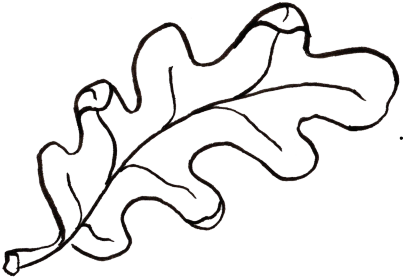
## B) Total Mileage

- Write the rounded number of miles for each segment on the map in the table.
- Add the miles and write the total in the table.
- Write the total miles in the sentence.

Starting at Nina's house:

| Pennsylvania | a | State Border | b | Hanover | c | Spring Grove | d | Susquehanna River | e | Grandparent's House |
|--------------|---|--------------|---|---------|---|--------------|---|-------------------|---|---------------------|
| Total:       |   |              |   |         |   |              |   |                   |   |                     |

Nina's family will drive about \_\_\_\_\_ miles.



## Food Fractions!

| Halved                                        | Cranberry Sauce Ingredients                                   | Doubled             |
|-----------------------------------------------|---------------------------------------------------------------|---------------------|
| $1\frac{1}{8}$ cups                           | makes $2\frac{1}{4}$ cups of sauce                            | $4\frac{1}{2}$ cups |
| $\frac{1}{4}$ cup                             | $\frac{1}{2}$ cup orange juice                                | 1 cup               |
| $\frac{1}{4}$ cup                             | $\frac{1}{2}$ cup water                                       | 1 cup               |
| $\frac{1}{3}$ cup                             | $\frac{2}{3}$ cup sugar                                       | $1\frac{1}{3}$ cups |
| 2 cups                                        | 4 cups cranberries (a 12 oz. package)                         | 8 cups              |
| <b>Optional</b> (add some or all if you want) |                                                               |                     |
| $\frac{1}{16}$ tsp.                           | $\frac{1}{8}$ tsp. ground spices: cinnamon, ginger, or nutmeg | $\frac{1}{4}$ tsp.  |
| $\frac{1}{2}$                                 | 1 orange, peeled and chopped                                  | 2                   |

## Thanksgiving Dinner Budget

Double-check your student's calculations and make sure all of the foods on their list add up to \$50 or less.

## Thanksgiving Travel Plans

### A) Rounding Miles

a  $6.2 \approx \underline{6}$  miles

b  $4.8 \approx \underline{5}$  miles

c  $9.7 \approx \underline{10}$  miles

d  $23.3 \approx \underline{23}$  miles

e  $16.9 \approx \underline{17}$  miles

### B) Total Mileage

Starting at Nina's house:

|                           |   |           |
|---------------------------|---|-----------|
| Pennsylvania State Border | a | <b>6</b>  |
| Hanover                   | b | <b>5</b>  |
| Spring Grove              | c | <b>10</b> |
| Susquehanna River         | d | <b>23</b> |
| Grandparent's House       | e | <b>17</b> |
| Total:                    |   | <b>61</b> |

Nina's family will drive about **61** miles.