

Budget Bar Detectives

Compare each budget share to one fourth of the total.

7.13 "Personal financial literacy. The student applies mathematical process standards to develop an economic way of thinking and problem solving useful in one's life as a knowledgeable consumer and investor..."

NAME _____ DATE _____

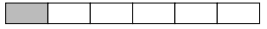
MORE THAN 25% OF THE BUDGET

The shaded part is more than $\frac{1}{4}$ of the full bar. This means the category is more than 25% of the total budget.

5 of 8 equal parts are shaded. $\frac{5}{8} = 62.5\%$, so it is more than 25%. 

ONE FOURTH OR LESS OF THE BUDGET

The shaded part is $\frac{1}{4}$ or less of the full bar. This means the category is 25% or less of the total budget.

1 of 6 equal parts is shaded. $\frac{1}{6}$ is less than 25%, so it is one fourth or less. 

1 SORT 8 items

For each budget bar, circle MORE THAN if the shaded part is more than 25% of the whole, or circle ONE FOURTH if it is 25% or less.

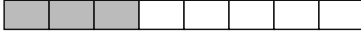
1. 

Figure 1

MORE THAN **ONE FOURTH**

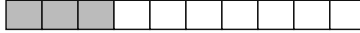
2. 

Figure 2

MORE THAN **ONE FOURTH**

3. 

Figure 3

MORE THAN **ONE FOURTH**

4. 

Figure 4

MORE THAN **ONE FOURTH**

5. 

Figure 5

MORE THAN **ONE FOURTH**

6. 

Figure 6

MORE THAN **ONE FOURTH**

7. 

Figure 7

MORE THAN **ONE FOURTH**

8. 

Figure 8

MORE THAN **ONE FOURTH**

2

PROVE IT

Explain your thinking

Pick two items from Part 1. For each one, tell how you knew where it belonged.

ITEM # _____ HOW I KNEW _____

ITEM # _____ HOW I KNEW _____

3

MAKE YOUR OWN

One of each

Part 2 PROVE IT: Pick two figures you sorted. For each figure, explain how you know it is more than 25% or one fourth or less. Part 3 MAKE YOUR OWN: Draw one new budget bar for MORE THAN and one new budget bar for ONE FOURTH.

MORE THAN _____

ONE FOURTH _____

CHALLENGE

A budget category costs \$720 from a total monthly budget of \$2,400. Find the percent of the budget, then decide which category label fits.

PART 1 • SORT

#	ITEM	CATEGORY	WHY
1	Figure 1 (fractionbars)	MORE THAN	$3/8 = 37.5\%$, which is greater than 25%.
2	Figure 2 (fractionbars)	MORE THAN	$3/10 = 30\%$, which is greater than 25%.
3	Figure 3 (fractionbars)	ONE FOURTH	$1/5 = 20\%$, which is less than 25%.
4	Figure 4 (fractionbars)	MORE THAN	$4/6 = 2/3$, which is greater than 25%.
5	Figure 5 (fractionbars)	ONE FOURTH	$2/8 = 1/4 = 25\%$.
6	Figure 6 (fractionbars)	ONE FOURTH	$1/8 = 12.5\%$, which is less than 25%.
7	Figure 7 (fractionbars)	MORE THAN	$5/12$ is about 41.7%, which is greater than 25%.
8	Figure 8 (fractionbars)	ONE FOURTH	$2/10 = 20\%$, which is less than 25%.

PART 2 • PROVE IT

Accept any explanation that names the deciding feature from the rule box for the chosen item.

PART 3 • MAKE YOUR OWN (SAMPLE ANSWERS)

- **MORE THAN:** Shade 9 of 16 equal parts. $9/16 = 56.25\%$, so it is more than 25%.
- **ONE FOURTH:** Shade 3 of 20 equal parts. $3/20 = 15\%$, so it is one fourth or less.

Challenge: $\$720 \div \$2,400 = 0.30 = 30\%$. The category is MORE THAN.

Accept equivalent fraction, decimal, percent, or visual-bar reasoning in Part 2. For the make-your-own bars, the student must correctly show a share above 25% and a different share at or below 25%.