






Focus
Standards
and Claim

Claim 3
4.NF.4c

Stimulus

Clay Pottery

Lizzie and Zela are interested in making pottery. The following chart shows how much clay is needed to make different projects.

Project	Pounds of Clay Needed
 Small Plate	$2\frac{1}{2}$
 Small Bowl	$1\frac{1}{2}$
 Large Bowl	$3\frac{1}{4}$
 Dinner Plate	$4\frac{1}{2}$
 Mug	$\frac{3}{4}$

Item Prompt

Lizzie has 12 pounds of clay and wants to use all of it. She does not need to make all of the projects, and may make more than one of any project.

Describe a plan for Lizzie to use 12 pounds of clay making projects from the chart.

Show how you know she will use **exactly** 12 pounds of clay with this plan.

Sample Responses

Sample Response A

$$2 \frac{1}{2} + 2 \frac{1}{2} = 5 \text{ pounds}$$

$$1 \frac{1}{2} + 1 \frac{1}{2} = 3 \text{ pounds}$$

$$5 + 3 = 8\text{lb}$$

$$8\text{lb} + 3 \frac{1}{4} = 11 \frac{1}{4} + \frac{3}{4} = 12\text{lb}$$

Lizzie would need to make two small plates, two small bowls, one large bowl, and one mug to use exactly 12 pounds of clay.

Sample Response B

Lizzie needs to make 1 dinner plate, 1 small bowl, 1 large bowl, 1 small plate, and 2 mugs to make 12 pounds.

Sample Response C

$$2 \frac{1}{2} + 2 \frac{1}{2} + 2 \frac{1}{2} = 7 \frac{1}{2}$$

$$7 \frac{1}{2} + 1 \frac{1}{2} + 1 \frac{1}{2} = 9 \frac{1}{2}$$

$$9 \frac{1}{2} + 2 \frac{1}{2} = 12 \text{ pounds}$$

I know that she will get exactly 12 pounds if she makes 4 small plates and 2 small bowls.

<p>Sample Response D</p>	<p>Dinner plate: $4 \frac{1}{2}$</p> <p>Small plate: $2 \frac{1}{2}$</p> <p>Small bowl: $1 \frac{1}{2}$</p> <p>Small bowl: $1 \frac{1}{2}$</p> <p>Mug: $\frac{3}{4}$</p> <p>Mug: $\frac{3}{4}$</p> <p>$4 \frac{1}{2} + 2 \frac{1}{2} = 7$ pounds</p> <p>$2 \frac{1}{2} + 1 \frac{1}{2} = 3$ pounds</p> <p>$\frac{3}{4} + \frac{3}{4} = 2 \frac{1}{4}$ pounds</p> <p>$7 + 3 = 10$ pounds</p> <p>$10 + 2 \frac{1}{4} = 12 \frac{1}{4}$ pounds</p>
<p>Sample Response E</p>	<p>She can 8 small bowls to exactly use 12 pound of clay because each bowl you use $1 \frac{1}{2}$ pound so if you do two of them that will equal 3 and since I know that $3 \times 4 = 12$ so thats 12 pound, so I do $4 \times 2 = 8$ so I did the small bowl.</p>
<p>Sample Response F</p>	<p>Small bowl + large bowl + large bowl + dinner plate + small bowl</p> <p>$1 \frac{1}{2} + 3 \frac{1}{4} + 3 \frac{1}{4} + 4 \frac{1}{2} + 1 \frac{1}{2}$</p> <p>$1 \frac{1}{2} + 3 \frac{1}{4} + 3 \frac{1}{4} = 7 \frac{3}{10} + 4 \frac{1}{2} + 1 \frac{1}{2} = 12 \frac{5}{14}$</p> <p>If she needs dishes she can make a small bowl, 2x large bowl, dinner plate, small bowl because she said she doesn't want to waste anything.</p>
<p>Sample Response G</p>	<p>$4 \frac{1}{2} + 2 \frac{1}{2} = 7 + 3 \frac{1}{4} = 10 \frac{1}{4} + \frac{3}{4} = 11$</p> <p>She can get the small bowl, dinner plate, large bowl, and a mug.</p>
<p>Sample Response H</p>	<p>Lizzie will use 12 pounds with 2 dinner plates because $4 \frac{1}{2}$ can be 12 pounds to use all of her clay.</p>