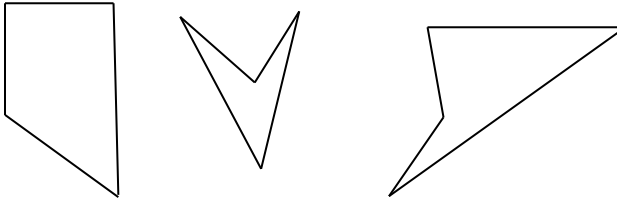


## CORE Assessment Module Module Overview

<b>Content Area</b>	Mathematics
<b>Title</b>	Fun on the Farm
<b>Grade Level</b>	Grade 3
<b>Problem Type</b>	Performance Task
<b>Standards for Mathematical Practices</b>	<p><b>Mathematical Practice 2 (MP2):</b> Reason abstractly and quantitatively.</p> <p>Mathematically proficient students:</p> <ul style="list-style-type: none"> <li>• Make sense of quantities and their relationships in problem situations.</li> <li>• Bring two complementary abilities to bear on problems involving quantitative relationships: <ul style="list-style-type: none"> <li>○ Decontextualize—to abstract a given situation and represent it symbolically; and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents) and</li> <li>○ Contextualize—to pause as needed during the manipulation process in order to probe into the referents for the symbols involved).</li> </ul> </li> </ul> <p>Use quantitative reasoning that entails creating a coherent representation of the problem at hand, considering the units involved, attending to the meaning of quantities (not just how to compute them) and knowing and flexibly using different properties of operations and objects.</p>
<b>Common Core State Standards</b>	<p><b>3.MD.8</b> Solve real-world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.</p> <p><b>3.G.1</b> Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.</p>
<b>SBAC Assessment Claims</b>	<b>Claim 2: Problem Solving</b> —Students can solve a range of complex well-posed problems in pure and applied mathematics, making productive use of knowledge and problem solving strategies.
<b>Task Overview</b>	In Part 1, students will be asked to solve problems involving the perimeter of polygons, including when all lengths are given and when there are missing lengths. In Part 2, students will again solve for the perimeter of a polygon with missing sides and then provide an argument involving the evidence from their problem solving. In Part 3, students will provide examples of other polygons that have a common perimeter, allowing for creativity and evidence of mathematics in their responses.
<b>Module Components</b>	1) Scoring Guide 2) Performance Task

## Fun on the Farm Scoring Guide

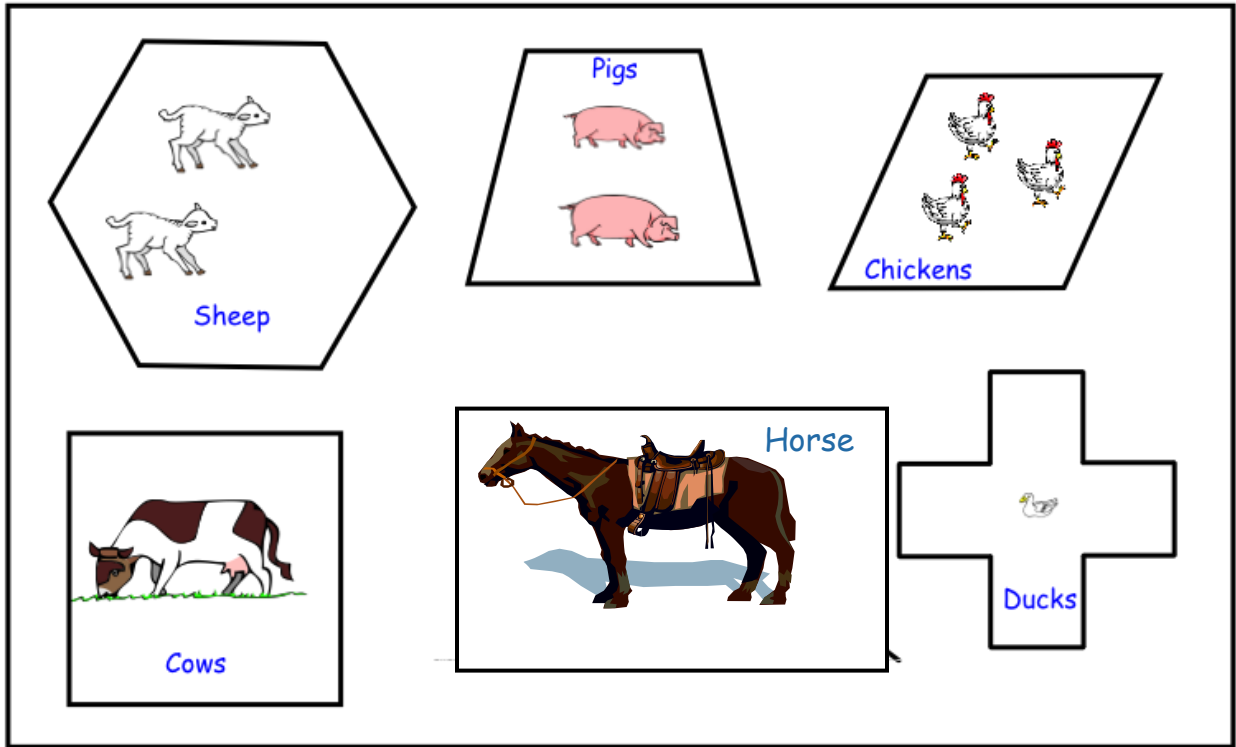
Part	Description	Points	Total Points
<b>1</b>	1. Student correctly finds the perimeter and shows work. $8 + 11 + 11 + 17 = 47$ feet	1	1
	2. Student shows work with correct answer given: $8 \text{ feet} \times 4 \text{ sides} = 32 \text{ feet}$ or $8 + 8 + 8 + 8 = 32 \text{ feet}$  Student correctly explains that squares have equal sides and is able to use multiplication or repeated addition to find the perimeter.	1  1	2
	3. a. Student gives correct answer: pig chicken cow horse	1 1 1 1	4
<b>2</b>	4. Student gives correct answer: 24 feet Student explains two ways to solve: <ul style="list-style-type: none"> <li>• Add up all the sides and subtract from 76.</li> <li>• I know that rectangles have opposite sides equal.</li> </ul>	1  1 1	3
	5. a. Student gives correct answer: No, the measurement does not follow the law. Reason: Sara's pen has a perimeter of 90 feet, not 100 feet. b. The explanation should have measurements that when added up equal or exceed the minimum of 100 feet.	1  1 1	3
<b>3</b>	6. Student's drawing must include a four-sided shape that is NOT a square, rectangle, or rhombus. Each side of the shape must be labeled with the length. The sum of all the sides must total 44 units.  <div style="display: flex; justify-content: space-around; align-items: center;">  </div> Here are some examples of four-sided shapes that aren't squares, rectangles or rhombuses.	1  1 1	3
<b>TOTAL POINTS:</b> (possible points = 16 points)			



Student Name \_\_\_\_\_

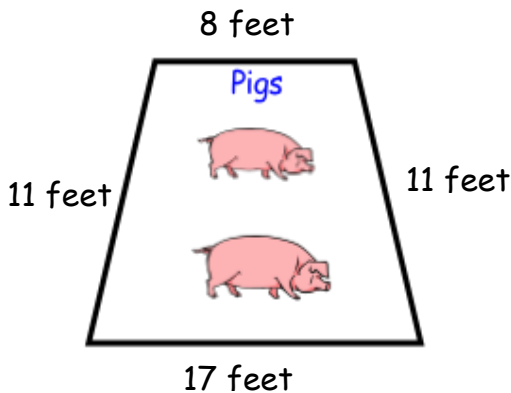
## Fun on the Farm

Farmer Sara has many different types of animals on her ranch. She wants to make new pens for her animals, so she drew this picture to help her plan. Before she builds the new pens, she needs to measure and buy materials.



### Part 1

1. Farmer Sara measured the outside of the pig pen and wrote her measurements below. What is the perimeter of the pig pen? Show your work.



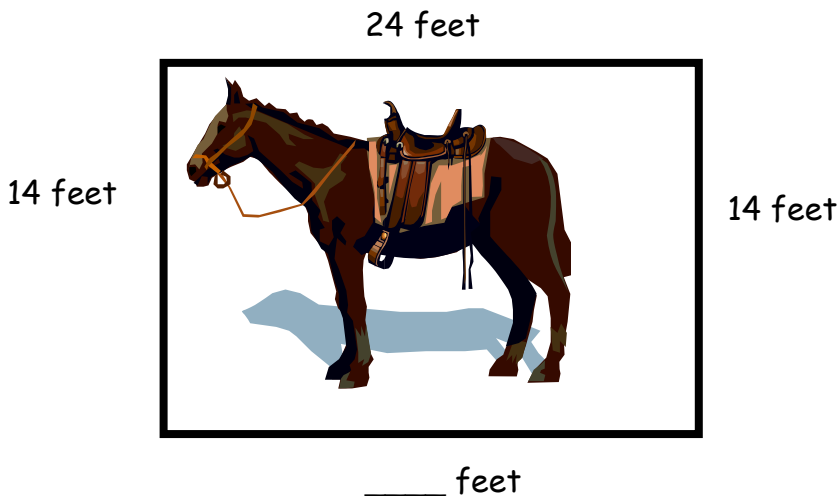
Student Name \_\_\_\_\_

2. The cow's pen is a square and one side equals 8 feet. How much fencing should Farmer Sara buy to make the perimeter of the pen? Show your work and explain how you know.

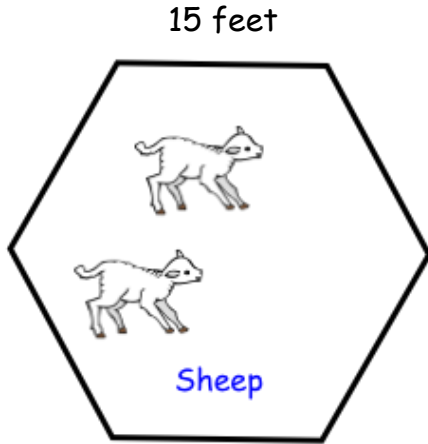
3. According to Farmer Sara's drawing, which animals have pens that are quadrilaterals?

**Part 2**

4. One of the sides of the horse pen blew over and needs to be replaced. Farmer Sara needs to buy new fence material for the missing side. The perimeter of the whole horse pen is 76 feet. What is the measurement of the missing side? Explain two ways you could find this out.



5. a. Farmer Sara wants to put two sheep in the sheep pen. According to Farm Law, the perimeter of a sheep pen for two sheep has to be at least 100 feet. If the pen is a regular hexagon, does the measurement that Sara planned follow the law? Why or why not?



- b. Explain to Farmer Sara what shape the pen could be and the measurements of the pen.

**Part 3**

6. Farmer Sara inherited some donkeys. She bought a total of 44 feet of fencing to build them a pen. Draw a quadrilateral that is not one of those already shown that has a perimeter of 44 feet. Be sure to label each side of the pen.