

Problems to Ponder

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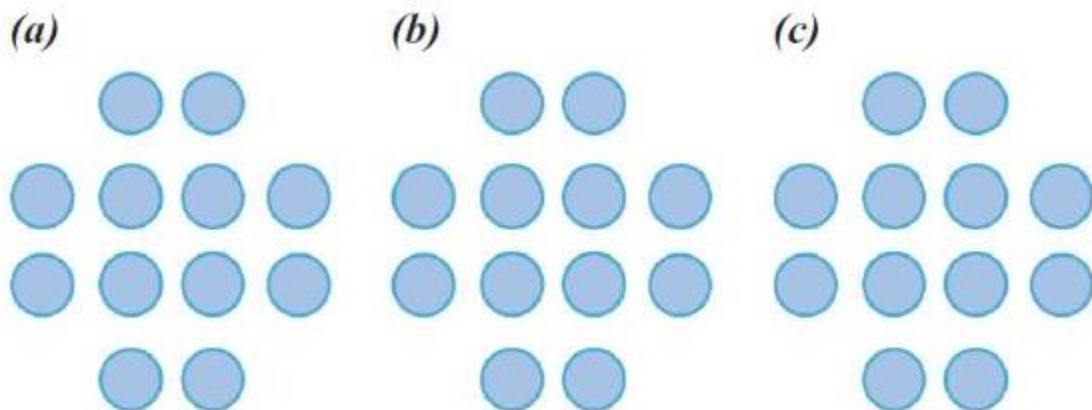
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Problem 4:

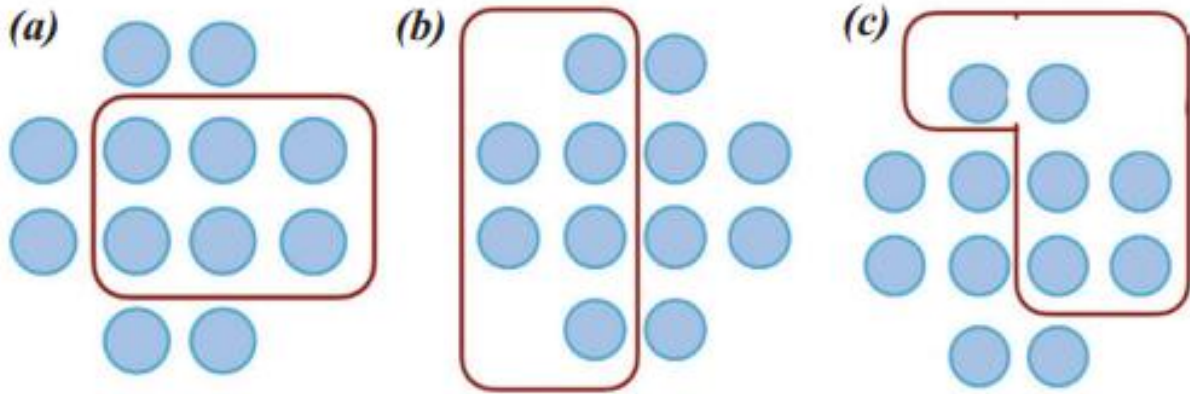
Find at least three ways to circle exactly half the dots.



For further thought: How many ways can you draw a line that doesn't touch any of the dots, but divides the dots into two equal groups?

Solution:

Answers will vary. Examples include the following:



For further thought: Younger students may see just two answers—vertical and horizontal lines through the center that create reflection symmetry. Older students may see that despite the narrow spacing, infinitely many lines can create rotational symmetry.