MIXED REVIEW of Problem Solving

STATE TEST PRACTICE
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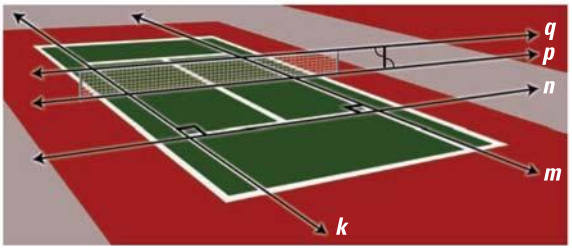
Lessons 3.1–3.3

1. **MULTI-STEP PROBLEM** Use the diagram of the tennis court below.



   a. Identify two pairs of parallel lines so each pair is on a different plane.

   b. Identify a pair of skew lines.

   c. Identify two pairs of perpendicular lines.

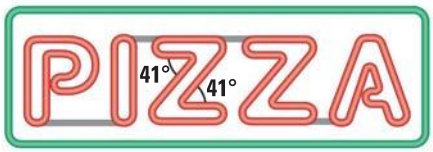
2. **MULTI-STEP PROBLEM** Use the picture of the tile floor below.

   a. Name the kind of angle pair each angle forms with $\angle 1$.

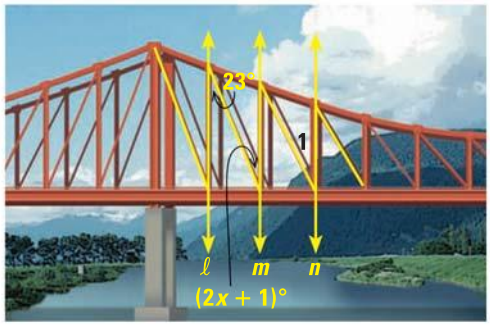
   b. Lines r and s are parallel. Name the angles that are congruent to $\angle 3$.

3. **OPEN-ENDED** The flag of Jamaica is shown. Given that $n \parallel p$ and $m\angle 1 = 53°$, determine the measure of $\angle 2$. *Justify* each step in your argument, labeling any angles needed for your justification.

4. **SHORT RESPONSE** A neon sign is shown below. Are the top and the bottom of the Z parallel? *Explain* how you know.



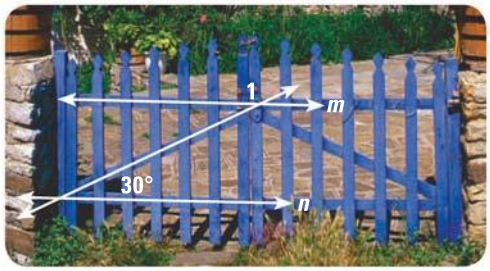
5. **EXTENDED RESPONSE** Use the diagram of the bridge below.



   a. Find the value of x that makes lines ℓ and m parallel.

   b. Suppose that $\ell \parallel m$ and $\ell \parallel n$. Find $m\angle 1$. *Explain* how you found your answer. Copy the diagram and label any angles you need for your explanation.

6. **GRIDDED ANSWER** In the photo of the picket fence, $m \parallel n$. What is $m\angle 1$ in degrees?



7. **SHORT RESPONSE** Find the values of x and y. *Explain* your steps.