

Each WA is now worth **10 points** total. Work right on these pages. You can work together or see a tutor, but NEVER copy. This WA is for a grade, so dishonesty or cutting corners may earn a 0 for all involved.

1. *[1 pt - 0.5 each]* Some 4th graders are deciding on strategies to try for a problem. Identify whether each student is describing how they might use the strategy, why it might work, both, or neither.
  - (a) Gan says: "I think we should use a table because we could make different columns for the animals and for their feet."
  
  - (b) Potta say: "I think we should draw a picture because that's going to be easier."
  
2. *[1 pt - 0.5 each]* Which of Polya's Four Steps seems to be illustrated most strongly in each instance below. (Give the number and state the step in words.)
  - (a) Benny is working together with Gan and Potta, and wants to use Guess and Check instead.
  
  - (b) Audra sped through the problem on her own, but then Gan noticed that she didn't have the right total number of animals in the end.
  
3. *[2 pts]* Solve using Guess and Check, clearly labeling your guesses and checks, and justifying each improvement with a few words of explanation. To be instructive to children, aim deliberately to need at least 2 guesses - don't let yourself get lucky on the 1st try. Clearly indicate the final answer.

*Cheese pizzas cost \$6 and pepperoni pizzas cost \$8. Principal Newton ordered 14 pizzas for the all-school party, and they cost \$100 altogether. How many of each kind of pizza did she order?*

4. [4 pts - 2 each] For parts (a) and (b) below, name and justify two different problem-solving strategies that could reasonably be attempted for it. **AVOID** repeating any strategies. Take care to tell “WHY to choose, not HOW to use.” Don’t actually solve the problems.

(a) Yasmin arrived home from play practice at 5:25 P.M. The walk home took 15 minutes. Practice began 20 minutes after the final bell and lasted for a 50 minutes. When did school end?

(b) Kelly is making bracelets that have 15 colorful beads in the center. The beads are red, yellow, green, orange, white, black, and blue. She always uses either 2 or 3 red beads for each bracelet. If she never uses the same color twice in a row, how many different looking bracelet designs can she make?

5. [2 pts] **Do solve**, by any meaningful method, naming the strategy you chose. Show clear work and/or explanation as appropriate, and clearly indicate the actual answer.

*Tom, Andrew, Carrie, and Gina have different favorite colors among red, yellow, orange, and blue. No one’s favorite color has the same number of letters as their name. Gina doesn’t like orange. What is Tom’s favorite color?*