

Math 200 - Quiz 1

January 27, 2010

Name key

Score _____

Show all work to receive full credit. Supply explanations when necessary.

1. (1 point) Clearly state Polya's four steps (in order).

1) UNDERSTAND THE PROBLEM

3) CARRY OUT THE PLAN

2) DEVISE A PLAN

4) LOOK BACK

2. (1 point) When using the 4-step problem-solving process, which one of these strategies would NOT be considered part of looking back?

(a) Generalize.

(b) Consider other possible solution methods.

(c) Keep notes of your work.

(d) Check your answer in the original wording of the problem.

3. (1 point) Describe two different strategies for carrying out the plan.

① IMPLEMENT YOUR PLAN

② KEEP NOTES OF WHAT YOU'RE DOING

③ CHECK YOUR WORK ALONG THE WAY

4. (2 points) A certain type of gutter comes in 6-foot, 8-foot, and 10-foot sections. How many different lengths can be formed (without cutting) using three sections of gutter? In conjunction with your approach to solving this problem, clearly explain how you used any one step of the four-step problem-solving process.

UNDERSTAND THE PROBLEM

SECTIONS COME IN LENGTHS

6FT, 8FT, OR 10FT.

WE COMBINE THREE SECTIONS.

THE SMALLEST 3-SECTION

PIECE IS 18FT.

THE BIGGEST IS 30FT.

WHAT LENGTHS BETWEEN 18 & 30
ARE POSSIBLE?

6, 8, AND 10 ARE EVEN NUMBERS

ADDING THEM MAKES EVEN NUMBERS
SO ONLY EVEN LENGTHS ARE POSSIBLE?

ARE ALL EVEN LENGTHS BETWEEN 18 &
30 POSSIBLE?

$$6+6+6=18$$

$$6+6+8=20$$

$$6+6+10=22$$

$$6+8+10=24$$

$$8+8+10=26$$

$$8+10+10=28$$

$$10+10+10=30$$

7 LENGTHS CAN
BE FORMED