

Put your answer on this page, but show all work on your attached piece of paper! You may use a calculator, but you still must show all steps. **On a separate piece of paper, do the following steps:**

Step 1: Draw a picture of the problem (if applicable)

Step 2: Identify the formula you need

Step 3: Identify & define the variables & the unknown variable

Step 4: Substitute the constants

Step 5: Solve for the unknown variable & answer question

- 1) Ms. Frühbauer wants to build a rectangular fence. She knows that the area needed to be covered is 28m^2 . She knows that one side has to be 7 m long.

What is the width of the fenced-in area? _____

- 2) You want to build a fence that is the same length as your house (your house is 12m long). You only have enough materials to have the width of the fence be 8m.

What is the area of the enclosed fence? _____

- 3) You have enough concrete to pour an area of 20m^2 . You want the patio you pour to be triangular and the base to be 5m. You know that the formula for the area of a triangle is

$$A_t = \frac{1}{2}bh$$

What is the height (h) of the patio? _____

- 4) You invest \$15,087 for 4 years, earning simple interest of \$1,784.

At what interest rate did you invest your money? _____

- 5) You are making a history project of a circular shield. You want your shield to have a radius of 5. You know that the formula for the area of a circle is

$$A_c = \pi r^2$$

What is the area that you have to cover? _____