

Name: _____

Date: _____

Math 25 Practice Midterm #1 –Van Slyke

*Work for up to 80 minutes. Do the fast problems first. Check your work where you can.
Show work for partial credit. Calculators are allowed on parts two and three.*

Part One: Skills Problems (no calculator)

1) Change 4.21 into percent format.

- a) 0.0421% b) 4.21% c) 4.21 d) 421%

2) Find 15% of \$15.

- a) \$0.15 b) \$1.50 c) \$2.25 d) \$225

3) Wesley invests \$1,000 for 2 years, at a simple interest rate of 5% annually. How much interest does he earn?

- a) \$50 b) \$100 c) \$5,000 d) \$10,000

4) A television that normally costs \$300 is on sale for \$210. What is the percentage of the discount?

- a) 0.3% b) 10%
c) 30% d) 90%

5) Two cups make one pint. A half-cup serving of Ben & Jerry's Cherry Garcia frozen yogurt has 160 calories. How many calories are in the entire pint tub?

- a) 80 calories b) 160 calories
c) 320 calories d) 640 calories

6) That half-cup serving of Ben & Jerry's Cherry Garcia frozen yogurt has 4 grams of protein. What percentage of the calories are from protein?

- a) one-fortieth b) one-sixteenth
c) one-tenth d) one-fourth

7) Reduce the fraction $\frac{240}{720}$

- a) one-ninth b) one-eighth
c) one-sixth d) one-third

8) A watermelon weighs 3 pounds, 13 ounces. An orange weighs 11 ounces. Find their average weight.

- a) two pounds b) two and one-quarter pounds
c) four and one-half pounds d) five pounds

9) What is $5^3 \div 5^2$?

- a) 1.5
- b) 5
- c) 12.5
- d) 25

Part Two: Homework-Like Problems

10) A family pays 15% of their income as income tax. Last year their income tax was \$3,750. How much was their income before taxes?

- a) \$562.50
- b) \$4,312.50
- c) \$25,000
- d) \$56,250

11) Amanda borrows \$400 for 30 days at 36% annual simple interest. How much interest will she pay?

- a) \$11.84
- b) \$43.20
- c) \$118.40
- d) \$4,320.00

12) Simple Sam invests \$10,000 in a 5-year certificate of deposit that pays 8% annual simple interest. How much will his investment be worth when it matures?

- a) \$4,000
- b) \$14,000
- c) \$400,000
- d) \$410,000

13) Compound Cynthia invests \$10,000 in a bond fund that pays 8% annual compound interest, compounded monthly. How much will her investment be worth after 5 years?

- a) \$14,693.28
- b) \$14,898.46
- c) \$54,000
- d) \$604,000

14) Ms. Goldman wants to have \$100,000 saved for her child to start college ten years from now. If her bank account earns 5% annual interest compounded monthly, how much money does she need to set aside now?

- a) \$875.00
- b) \$4,166.67
- c) \$16,666.67
- d) \$60,716.10

15) Gretchen is 36 years old, 5' 6" tall, weighs 140 pounds, and is moderately active. Find her BMR, rounded to the nearest calorie.

- a) 1,372 calories
- b) 1,526 calories
- c) 1,710 calories
- d) 2,016 calories

16) Find Gretchen's DCI, rounded to the nearest calorie.

- a) 2,249 calories
- b) 2,441 calories
- c) 2,503 calories
- d) 2,717 calories

17) If Gretchen eats one serving of Frosted Cheerios (110 calories), what percentage of her daily recommended calories has she eaten?

- a) 4%
- b) 5%
- c) 7%
- d) 8%

18) Complete the table below to show all eight possibilities for flipping 3 coins.

Heads, Heads, Heads	Heads, Heads, Tails		
Heads, Tails, Tails			

19) Use your table of coin flip possibilities to the probability when flipping three coins of having the first and third coins different.

- a) one-eighth
- b) one-fourth
- c) three-fourths
- d) one-half

20) Below is a breakfast recipe. If the apples you want to use have a 76 percent yield and cost \$1.30 per pound, find the total cost of enough apples to make 24 servings.

- a) \$11.86
- b) \$12.15
- c) \$15.60
- d) \$20.53

Apple Skillet Pancake (makes 4 servings)

Ingredients:

- 2 tbsp of unsalted butter
- 2 pounds chopped apples
- 3/4 cup milk
- 3/4 cup white flour
- 6 large eggs
- 4 tbsp sugar
- 3/4 tsp vanilla
- pinch of salt

Directions:

Preheat oven to 450 degrees. Melt the butter in a seasoned, 12-inch, cast-iron skillet on the stove at medium heat. Add the apples. Cook, while stirring, until soft. Meanwhile, put the remaining ingredients in a blender and blend until smooth. Pour the mixer's batter over the apples. Put the skillet in the oven. Bake about 15 minutes until the pancake is puffed and golden. Dust with powdered sugar and serve immediately.

21) Consider the floor plan (in Activity 7) for the Casa Apartment at the San Pablo's Living Skills Center for the Visually Impaired. You are hired to clean the carpets in the living room (12' 2" by 16' 6") of **ten** of these apartments. Your carpet cleaning rate is \$0.30 per square foot. How much do you charge for the entire job?

- a) \$595.64
- b) \$602.25
- c) \$607.56
- d) \$6,750.67