

DIRECTIONS: No calculators may be used. All cell phones must be turned off and put inside your bag. Be sure to show your work. Depending on the problem, you may receive no credit if no work is shown even if the answer is correct. If there is a blank, write your answer in the blank, otherwise **circle your answer**. Keep this test to study from for the final exam.

SQUARE ROOTS OF RATIONAL NUMBERS Find each value. If the value is irrational, so state. (3 points each)

1) $\sqrt{\frac{108}{8}}$

2) $\sqrt{0.49}$

3) $\sqrt{0.9}$

4) Write as a number: *two thousand three and three thousandths* _____

(2 points)

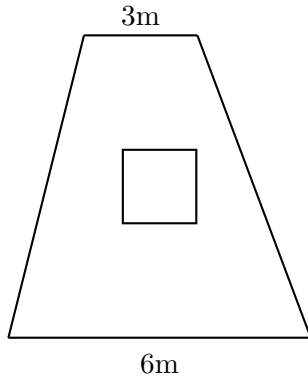
5) Round 12,495.09853 to the places given: (1 point each)

a) thousands

b) tenths

c) hundredths

GEOMETRY The following image is that of a trapezoid with a square hole cut out of it. The square measures 2.15m by 2.15m. Find the area of the region that is left after the hole is cut out. The height of the trapezoid is 7.5m. Be sure to use correct units in your answer. (6 points)



POLYNOMIALS Perform the operations required on the polynomials in problems seven through eleven. Be sure to look carefully to see if you are being asked to add, subtract, multiply, divide or raise to a power. Put your answer in the blank for each problem. (5 points each)

7) $1.5x^2(2x^3 - 3.2x)$ _____

8) $(5.2x^2 - 2.01x) - (3x^2 - 5x)$ _____

9) $(x + 0.5)(x - 4)$ _____

$$10) \left(\frac{1}{4}x^2 - \frac{2}{3}x - 3 \right) + \left(\frac{3}{8}x^2 + 1 \right)$$

$$11) \left(x - \frac{2}{3} \right) \left(x + \frac{1}{2} \right)$$

EQUATIONS Solve the equations in problems 12 - 14. Put your answer in the blank.
(5 points each)

$$12) \frac{1}{2}m - 5 = \frac{3}{4}$$

$$13) 6.5y - 12.8 = 13.85$$

14) $1.8(k - 4) = -3.5k - 4.02$ _____

EXPRESSIONS Simplify the following expressions completely. **CIRCLE** your answer.
(5 points each)

12) $\left(-\frac{1}{2}\right)^5$

13) $\frac{8.4a^2b^6}{0.2a^7b^4}$

14) $7\frac{1}{4} + \frac{3}{4}\sqrt{\frac{4}{9}}$

16) $\left(\frac{2}{3}\right)^2 \div \frac{1}{3} \left(1\frac{1}{3} + \frac{5}{6}\right)$

17) $-0.45(0.3) + (-1.2)^2$

WORD PROBLEMS

- 18) Two angles are supplementary. One angle is $\frac{1}{3}$ the measure of the other. Find the angle measurements.
- 19) Twice m decreased by 9.9 is the product of m and -6.25 . Find m .
- 20) An FM radio station broadcasts at a frequency of 102,300,000. Write this number in scientific notation.
- 21) An electric company charges \$0.1316 per kilowatt-hour. Margaret uses 698 kilowatt-hours one particular month. What will be the cost?

22) The area of a rectangular painting is 358.875 square inches. If the length is 16.5 inches, what is the width?

23) A box of rice contains $4\frac{1}{2}$ cups of uncooked rice. The label indicates that a single serving is $\frac{1}{4}$ cup of uncooked rice. How many servings are in the box?

24) Find the area of a triangle that has a base of 8 feet and a height $2\frac{1}{4}$ feet.

25) Nadine buys 5.31 pounds of chicken at \$1.19 per pound. What is the total cost of the chicken?

**** PLEASE NOTE:** *This is a practice test, but it is only one aid to your study. Also study the quizzes you've taken, the homework you've done and the chapter test and chapter review at the end of these chapters. You see only two word problems here, but we had many types of word problems, and you may be tested on any of those types. Your test may have more or fewer problems, they may be arranged in a different order, and it may have problems of a sort you do not see here. The key is to know all of the topics we've covered in class, so be sure to use the other aids I've mentioned here as well.*