

422A Integrated Algebra I

Name: \_\_\_\_\_

GDRHS

Date: \_\_\_\_\_

***Integrated Algebra I Packet – for students entering 422A***

***Summer Work***

Dear Student,

Attached please find a packet of math review problems that you are expected to complete prior to entering your Integrated Algebra I 422A class this school year. These problems reflect fundamental math concepts/skills that you worked on during your eighth grade math class.

We expect your work to include detailed steps, adequate spacing and be clearly legible. All documentation should be presented in an organized manner. We strongly suggest that you work on these problems over the course of the summer (if you have Integrated Algebra I 422A in the fall semester) or fall (if you have Integrated Algebra I 422A in the spring semester) and not try to do this packet in one or two days. We are expecting quality work. All work should be done **without a calculator** unless otherwise indicated.

These packets will be collected on the first day of your Integrated Algebra I 422A course and reviewed by that teacher. It will be graded for completion as an assignment. While there will not be a single test on these topics, these skills will be assessed on subsequent tests that will be administered during the semester.

We look forward to working with you this coming school year.

Integrated Algebra I teachers

Groton-Dunstable Regional High School

Problem Set A.

1. In one basketball game, Julian scored  $\frac{3}{7}$  of his free throws. In a second basketball game, he scored  $\frac{1}{2}$  of his free throws. In which game did he perform better?
  
2. It takes Mr. Apgar about  $1\frac{1}{2}$  work days to install a tile floor in an average-size kitchen. How many days would it take him to install floors for 6 kitchens?
  
3. Leslie has  $7\frac{1}{2}$  cups of cooked pasta. She wants each serving to be  $\frac{3}{4}$  cup. How many servings does she have?
  
4. Natalie got 17 out of 20 questions correct on her science test. What percent did she get correct?
  
5. The length of Jon's backyard is 100 yards and the width is 55 yards.
  - a. What is the perimeter of the backyard?
  - b. What is the area of the backyard?

6. Which fraction is not equivalent to  $\frac{9}{12}$  ?

- a.  $\frac{3}{4}$       b.  $\frac{6}{8}$       c.  $\frac{8}{11}$       d.  $\frac{75}{100}$

7. Add or subtract as indicated. Write your answer in lowest terms.

- a.  $\frac{2}{3} + \frac{1}{2}$       b.  $3\frac{3}{8} - 1\frac{5}{8}$

c.  $6 - 2\frac{3}{4}$

d.  $3\frac{1}{2} + 4\frac{4}{5}$

8. Find the improper fraction and write it as a mixed number.

- a.  $\frac{6}{12}$       b.  $\frac{4}{3}$       c.  $3\frac{5}{6}$

9. Multiply or divide.

- a.  $\frac{4}{5} \cdot \frac{1}{2}$       b.  $\frac{3}{4} \div 1\frac{1}{2}$

c.  $3\frac{3}{8} \cdot \frac{2}{9}$

d.  $7\frac{1}{2} \div 2\frac{1}{2}$

10. Give the place value of 6 in 35.063.

11. Write 3.003 in expanded form.

12. Write as a decimal: four hundred and four hundred four thousandths.

13. Write the following numbers in order from least to greatest: 1.650, 1.605, 1.065, 0.165

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14. Solve by showing all your steps.

a.  $3.604 + 12.55$

b.  $11.4 - 10.08$

c.  $(6.05) \cdot (5.1)$

d.  $67.392 \div 9.6$

15. Use a calculator. Round answers to the nearest tenth. Include all steps.

a. What percent of 80 is 24?

b. Find 23% of 121.

c. 44 is 80% of what number?

Problem Set B

16. Write an equation for each sentence.

a. If 3 is subtracted from twice a number, the result is 9 more than the number.

b. 4 times the sum of a number and 2 is less than twice the number.

17. Simplify (without a calculator)

a.  $-4+9$

b.  $-11+2$

c.  $6-4\cdot 2$

d.  $-9-(-33)$

e.  $-3 + (-4)$

f.  $80 + (-102)$

g.  $\frac{12+2}{-7}$

h.  $3^2 - (1+2)$

i.  $(-3)(4)\left(-\frac{1}{2}\right)$

j.  $7.2(-0.2)$

18. Solve each equation.

a.  $m - 17 = 24$

b.  $40 + t = 21$

c.  $8d = 48$

d.  $2x + 5 = -13$

19. Collect or combine like terms. Distribute if needed.

a.  $2a + 7b + 4a - 5b$

b.  $6 + (-5x) + (-7) + 6x$

c.  $2(x + 4y) - 5x + y$

d.  $3(2w - 3v) + 4v$

20. Given  $a = 3$  and  $b = -2$ , evaluate the following expressions.

a.  $a + b$

b.  $2a - b$

c.  $\frac{6a}{b}$

d.  $(a)(4b)$

21. Use a proportion to solve each problem. Calculator is OK

a. In a class, the ratio of boys to girls is  $\frac{2}{3}$ . If there are 12 boys in the class, how many girls are there?

b. A map is drawn using a scale of 200 miles to 1 centimeter. The distance between two cities is 1,300 miles. How far apart are the two cities on the map?

22. Given the letter pattern : **ABCDABCDABCD.....**, what letter would be in the twentieth place?

23. Find the next three terms in this sequence: **74, 67, 60, 53, ?, ?, ?**

24. Using the coordinate grid, plot and label the following points:

$A(5, 6)$

$B(1, -4)$

$C(0, 3)$

$D(-3, 4)$

$E(-2, -7)$





