

One-half point per answer

For the following, a, b, c, and d are all greater than 1. Label each as T (true), F (false), or N (not enough information to determine).

1. If $b < d$, then $\frac{3}{b} > \frac{3}{d}$.
2. $\frac{a}{c} - \frac{b}{d} = \frac{ad - bc}{cd}$.
3. If $a > d$ and $c < b$, then $\frac{a}{d} \div \frac{c}{b} > 1$.
4. $\frac{b}{a} + \frac{d}{c} < 0$.
5. $\left(\frac{a}{b}\right)^2 = 1$.
6. If $0 < \frac{a}{b} < 1$, then $b > a$.
7. $1 - \frac{a}{b} \leq 0$.
8. If $\frac{a}{b} > 1$, then $b < a$.
9. $\frac{1}{6} = 0.\bar{3}$.
10. $\frac{13}{12} > \frac{14}{13}$.

One point per problem

11. Write $0.\overline{71}$ as a fraction in simplified form.
12. Divide 0.00056 by 0.16 and round to the nearest thousandths.
13. Write eighteen and five hundred four thousandths as a mixed number in simplified form.
14. Sunflower seeds are sold in packages that weigh $3\frac{1}{4}$ ounces. If there is a supply of 66 ounces of sunflower seeds, how many full packages of seed can be made?
15. Simplify $\frac{5\frac{1}{2} - 3\frac{1}{4}}{8\frac{3}{4} + 10\frac{1}{2}}$, and express it as a fraction in simplified form.

Two points per problem

16. An analysis of freshmen at a college revealed that $\frac{1}{4}$ of the freshman women were from homes where both parents were professionals. Of these, $\frac{3}{5}$ were interested in the same profession as one or both of their parents. If this latter group is made up of 18 students, how many freshman women are there?
17. $\frac{a}{b} \times \frac{a+2}{2b} = \frac{3}{8}$ If a and b are one of the digits 1 to 5 (without repeats), then find a value for each letter.
18. A company receives medicine in 1-gallon (128-ounce) jars and then sells the medicine in vials that hold 1.25 ounces. If the company buys 1 gallon of medicine for \$234.67, and then sells each vial for 5 dollars, how much profit will they make on the complete vials?
19. Henry is currently working at a job that pays \$9.45 per hour, and he regularly works 40 hours per week. Another company has offered to pay him an annual salary of \$24,000. If Henry works for 36 weeks a year and takes the new offer, how much will his hourly wage increase to the nearest cent?
20. It was reported that Ross Perot spent approximately \$40 million of his own money in the 1992 presidential election. His total worth is reported to be approximately \$4 billion. If your total worth was \$50,000, and you spent the same fraction of your worth on an election as Perot did, how much would you have spent?

School Name _____

JR. HIGH MATH LEAGUE
Fractions and Decimals

GROUP 8-II TEST A
Spring 2001

ANSWER SHEET

One-half point per answer

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

One point per problem

11. _____

12. _____

13. _____

14. _____ packages

15. _____

Two points per problem

16. _____ freshman women

17. a= _____

b= _____

18. \$ _____ profit

19. \$ _____ per hour

20. \$ _____