FOR MATH 59, 60 SHOW YOUR WORK ON A SEPARATE SHEET OF PAPER.

EVERY SOLUTION ON THIS EXAM CONTAINS AT LEAST ONE ERROR. DESCRIBE EACH ERROR AND THEN REDO EACH PROBLEM CORRECTLY.

PRE-ALGEBRA EXAM

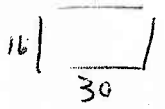
1) Evaluate the expression $\frac{2x}{y}$ for x = 10 and y = -5.

$\frac{2(10)}{-5} = \frac{12}{-5} = -2\frac{2}{5}$

2) Write an algebraic expression to represent nine less than some number n.

$9 - n$

3) Find the area of a triangle with height 16 ft. and base 30 ft.



$30 \times 16 = 480$ ft.

4) Evaluate the expression 96 – a when a = -3.

$96 - 3 = 93$

5) Multiply $5(6 - x)$ =

$30 - x$

6) Multiply $-5z(y - 1)$

$-5yz - 5z$

7) Factor $21x + 7 + 14y$

$7(3x + 2y)$

8) Factor $33x - 44x^2$

$11x^2(3 - 4x)$

9) Find the prime factorization of 300.

$300 = 30 \cdot 10 = 5 \cdot 6 \cdot 10$

10) Evaluate the expression $-2x^2$ for x = -5.

$(-10)^2 = 100$

For problems 11-22 compute the answer. Do not use a calculator.

11) $3.1 - (-4.7) = 3.1 + 4.7 = 1.6$

12) $\frac{2}{5} + \frac{3}{8} = \frac{2+3}{5+8} = \frac{5}{13}$

13) $3.2 - 5.7 = 2.5$

14) $-4(-12) = -48$

15) $-54 \div 6 = -8$

16) $2 - (-8) = -2 + 8 = 6$

17) $\frac{1}{8} - \left(\frac{-3}{4}\right) = \frac{1}{8} + \frac{3}{4} = \frac{4}{12} = \frac{1}{3}$

18) $\left(\frac{-1}{2}\right)\left(\frac{-3}{8}\right) = \frac{6}{8} = \frac{3}{4}$

19) $\left(\frac{-3}{5}\right) \div \left(\frac{-4}{5}\right) = -\frac{5}{3} \cdot \frac{4}{5} = \frac{4}{3}$

20) $-2(16) - 2(-8) = -32 + 16 = -48$

21) $6 + 7 - 4 - (-3)$

$6 + 7 - 4 + 3 = 13 - 7 = 6$

22) $5^2 - 2^2$

$10 - 4 = 6$

For 23-25 simplify each expression.

23) $(-2x)^4 = 2x^4$

24) $5x - (3x - 7)$

$-15x^2 + 35x$

25) $4a(2a - 3b) - 5b(a + 7)$

$4a^2 - 12ab - 5ab - 35b$

$4a^2 - 17a^2b^2 - 35b$