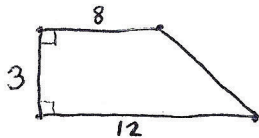


Winter 2011 Math 89 Final Exam Version mek

- (1) a. Is  $-2$  an integer?  
 b. Is  $-2$  a rational number?  
 c. Is  $-2$  a whole number?  
 d. Is  $-2$  a real number?
- (2) Insert  $<$ ,  $>$ , or  $=$  in the appropriate space to make the statement true:  $|-5|$  \_\_\_\_\_  $3$ .
- (3) Compute  $\frac{7}{18} \div 3\frac{1}{6}$ . Write your answer in lowest terms.
- (4) Compute  $2\frac{1}{2} + 5\frac{2}{3}$ . Write your answer in lowest terms.
- (5) Simplify  $\frac{2 + |9 - 6| + 4^2}{6 - 5}$ .
- (6) Compute  $-\frac{7}{15} + \left(-\frac{4}{5}\right)$ . Write your answer in lowest terms.
- (7) Is  $-5$  a solution of  $x + 5 = 10$ ?
- (8) Compute  $-\frac{2}{9} - \frac{5}{7}$ . Write your answer in lowest terms.
- (9) Evaluate  $\frac{7-x}{y+7}$  when  $x = 7$  and  $y = 2$ .
- (10) Multiply  $-\frac{7}{8} \left(-\frac{16}{49}\right)$ . Write your answer in lowest terms.
- (11) Simplify  $\frac{-2 - 2(-9)}{-16 - 3(-4)}$ .
- (12) Use the distributive property to write the expression  $-\frac{1}{3}(15x - 12y)$  without parentheses.
- (13) Simplify  $5(x + 4) - (3x - 5)$ .
- (14) Simplify  $\frac{1}{4}(28x - 8) - (x + 7)$ .
- (15) Solve  $-2(x + 2) + 3x = 10$ .
- (16) Solve  $5 = -5(4x + 3) + 21x$ .
- (17) Solve  $\frac{5}{6}x - \frac{2}{3} = 1$ .
- (18) Solve  $\frac{x}{5} - 3 = \frac{x}{7} - 1$ .
- (19) A 30-inch board is to be cut into three pieces so that the second piece is four times as long as the first piece, and the third piece is five times as long as the first piece. Find the lengths of all three pieces.
- (20) Substitute  $A = 34$ ,  $B = 10$ , and  $b = 7$  into  $A = \frac{1}{2}h(B + b)$ , and then solve for  $h$ .
- (21) Solve the formula  $A = P + PRT$  for  $T$ .
- (22) Solve  $6(4x - 1) \geq 3(4x - 6)$ . Graph the solution set and write it in interval notation.
- (23) Solve  $-2(x - 6) - 4x < -(4x + 3) + 3x$ . Graph the solution set and write it in interval notation.
- (24) Find the area of the trapezoid.



- (25) The volume of the figure below is  $27 \text{ in}^3$ . Find  $h$ .

