

Math 0020 June 13, 2007 Sample Test 1

Perform the operations, if possible, and simplify.

- 1) $(-8) + (-4)$
- 2) $\frac{5}{0}$
- 3) -5^2
- 4) $(-2)^2$
- 5) $\frac{-24}{-8}$
- 6) $5 + 6(8 - 2)$
- 7) $10 - 2(15 - 3) - 5 \cdot 2$
- 8) $14 + 2 \cdot 15 \div 6 - 3 + 4$
- 9) $5x + x - 3x$
- 10) $(2a - b) - (a - 3b)$
- 11) $5a + 3a^2 - 4a - a^2 + 5 + a^3 - 6$

Evaluate the following when $a = -3$, $b = 4$, and $c = 2$.

12) $a^2 + b^2 + c^2$

Convert into an algebraic expression.

13) A number decreased by six.

Find the solution set for the following.

- 14) $x + 9 = 26$
- 15) $2x - 1 = 3x + 4$
- 16) $10x - 7 = 4x + 3$
- 17) $5x + 6 = 6$
- 18) $\frac{1}{3}x + 4 = \frac{5}{6}$
- 19) $3(2x - 1) + 2(5x - 3) = 8$

- 20) $2x + 1 < 7$
- 21) $3x + (x - 1) > 7 - x$
- 22) $-1 < 2x + 3 < 11$
- 23) $-16 \leq 8 - 4x \leq 12$

- 24) Solve for y : $x = a(y + z)$

25) \$10,000 is invested in stocks and bonds. Stock earns 6%, and bonds earn 5%. If the total earnings was \$560, how much was invested each in stock and bonds?

26) Twice a number decreased by two is at most ten. Find the solution.