

**BRONX COMMUNITY COLLEGE**  
of the City University of New York

**DEPARTMENT OF MATHEMATICS & COMPUTER SCIENCE**

**MTH 28.5 Review Sheet I**

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1. Perform the indicated operations and simplify:

(a)  $(-7) - (-4)$       (b)  $(-7) + 14$       (c)  $8 \div 0$       (d)  $0 \div 2$       (e)  $24 \div (-3)$

(f)  $5(-7)$       (g)  $-2^4$       (h)  $(-2)^4$       (i)  $\frac{-12}{-4}$       (j)  $\left(\frac{2}{5}\right)\left(-\frac{1}{4}\right)$

(k)  $2 - \frac{1}{5}$       (l)  $\frac{1}{3} \div (-2)$       (m)  $\left(-3\frac{5}{6}\right)\left(1\frac{3}{4}\right)$       (n)  $-2\frac{3}{4} + 1\frac{2}{3}$

2. Perform the indicated operations and simplify:

(a)  $(-7)(-6)(-3)$       (b)  $2^3 - 3^2 + (3)(4)$       (c)  $5 - 3 - [2 - (-3 + 5)]$       (d)  $16 - 7 - 9 + 11$

(e)  $5 \cdot 2^3 - 3$       (f)  $3 - 2[1 - (2 - 9)]$       (g)  $\frac{-3 + 5}{-5 + 4} - 3 + 6$       (h)  $\frac{3}{4}(17 - 3 \cdot 3)$

3. Evaluate:

(a)  $C = \frac{5}{9}(F - 32)$ , if  $F = 50$ .

(b)  $3a + bx - cy$ , if  $a = -2$ ,  $b = 3$ ,  $c = -4$ ,  $x = 1$ ,  $y = 0$ .

(c)  $5a + x^2 - by$ , if  $a = -2$ ,  $b = 4$ ,  $x = 16$ ,  $y = -6$ .

(d)  $-x^2 - 2x - 5$ , if  $x = \frac{1}{2}$ .

4. Solve:

(a)  $11 + 3x = 26$

(b)  $5x - 3 = 3x + 3$

(c)  $x - 4 + 2x = 5x - 1 - 2x$

(d)  $\frac{x+2}{5} - \frac{x+3}{4} = \frac{5}{2}$

(e)  $3(2x - 1) - (7x + 1) = 3(3x - 4)$

5. Solve for the indicated variable:

(a)  $C = \frac{5}{9}(F - 32)$ , for  $F$       (b)  $z = 5x - 7y$ , for  $x$       (c)  $3x - 2y = 7$ , for  $y$

6. Solve the inequality and graph the solution set :

(a)  $2x + 1 \leq 4x - 3$       (b)  $3x - 2 > x$       (c)  $2x - (3x + 5) > 4x - 2(3x - 2)$

7. Sketch the graph of the linear equation:

(a)  $3x + 2y = 6$       (b)  $y = 2x - 3$       (c)  $x = 3$

8. Function  $f$  is given by  $f(x) = 7x - 8$ . Find

(a)  $f(3)$       (b)  $f(a + 5)$       (c)  $f(3t)$

9. Function  $f$  is given by  $f(x) = 3x^2 - 5x + 3$ . Find

(a)  $f(1)$       (b)  $f(3)$       (c)  $f(-2)$

10. Perform the indicated operations :

(a)  $(3x^2 - 2x + 3) + (-2x^2 + 3x - 7)$       (b)  $2x^2 - 4x + 5 - (3x^2 - 11x + 6)$       (c)  $(4a^2b^3)^2$

(d)  $(3x^2y^5)(5xy^3 - 3x^2y^2 + 2x^3y^2)$       (e)  $(x^2 - 3x + 2)(2x^2 - 3x + 7)$       (f)  $\frac{20x^5y^7}{4x^2y^7}$

(g)  $(3x^3 - 2x^2 + 4x - 6) \div (x - 5)$       (h)  $\frac{24a^5b^4 + 16a^7b^3 - 8a^3b^2}{8a^3b^2}$       (i)  $\frac{3ab^{-1} \cdot 5a^3b^2}{(3a^3b)^2}$

11. Simplify and write the answer in decimal form.

(a)  $3.5 \times 10^{-3}$       (b)  $(2 \times 10^3)(6 \times 10^{-1})$       (c)  $\frac{2 \times 10^3}{5 \times 10^6}$