

Final Exam Review (pt 1)

MATH 9

MIDTERM REVIEW

NAME _____

BLOCK _____

132 = %

A. Simplify.

(1) $(4x + 3y - z) - (2x - y + 2z)$

(6) $-3(2x + 5y) - 2(x - 2y)$

(2) $5x(6x - 3)$

(7) $(x - 5)(x + 2)$

(3) $(x + 5)^2$

(8) $2(2x - 3y)(4x - y)$

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

(9) $(-4x^2)^3$

(5) $\frac{24x^3y^2z^4}{-3x^2y^2z}$

(10) $\frac{10x^3y^2 - 8x^2y^2}{2xy}$

B. Simplify. (1 mark) Then evaluate if $x = -2$ and $y = 6$ (1 mark)

(11) $3x - y + 4y - x$

(13) $(x - 4)(x - 2)$

(12) $5 - 3(x + 2y)$

(14) $\frac{8y^3 - 4y^2}{2y}$

C. Factor completely.

(15) $4x^3y^2 - 6x^2y + 10xy^2$

(19) $9x^2 - 49$

(16) $x^2 - 11x + 18$

(20) $2x^2y + 8xy + 6y$

(17) $x^2 + 2x - 8$

(21) $3x^2 - 27$

(18) $x^2 - 3xy - 28y^2$

(22) $2x^2 + 20x + 50$

D. Solve (1mark) and check (1 mark).

$$(23) 4x + 11 = 3$$

$$(24) 5x + 7 = 8x - 5$$

$$(25) 5(3x - 1) = 8x + 9$$

$$(26) \frac{x}{2} - 3 = \frac{3x}{4}$$

Extra

E. Solve each equation for x.

$$(27) ax + c = d$$

$$(29) a + \frac{x}{c} = b$$

$$(28) cdx = g$$

$$(30) 3(x + a) = c$$

14

~~omit~~

F. Solve (1mark), check (1mark) and graph (1 mark).

~~(31)~~ $2x - 5 \leq 3$

~~(32)~~ $4x - 5 < 6x + 1$

G. Evaluate.

(33) $7\sqrt{121} - 5\sqrt{36}$

(36) $\sqrt{5^2} + 4(9) - 12$

(34) 6^{-2}

(37) $(\frac{3}{4})^3$

(35) $3^4 + 5^3$

(38) $(-7)^0$

Part One Final Exam Review Answers (MAY)

(PART A)

① $2x + 4y - 3z$

② $30x^2 - 15x$

③ $x^2 + 10x + 25$

④ $-12x^6$

⑤ $-8xz^3$

⑥ $-8x - 11y$

⑦ $x^2 - 3x - 10$

⑧ $16x^2 - 28xy + 6y^2$

⑨ $-64x^6$

⑩ $5x^2y - 4xy$

(PART B)

⑪ $2x + 3y ; 14$

⑫ $-3x - 6y + 5 ; -25$

⑬ $x^2 - 6x + 8 ; 24$

⑭ $4y^2 - 2y ; 132$

(PART C)

⑮ $2xy(2x^2y - 3x + 5y)$

⑯ $(x-9)(x-2)$

⑰ $(x+4)(x-2)$

⑱ $x^2 - 3xy - 28y^2$

⑲ $9x^2 - 49$

⑳ $2y(x+3)(x+1)$

㉑ $3(x+3)(x-3)$

(PART D)

⑳ $x = -2$

㉑ $x = 4$

㉒ $x = 2$

㉓ $x = -12$

(PART E)

㉔ $x = \frac{-c+d}{a}$

㉕ $x = \frac{9}{cd}$

㉖ $x = -ac + bc$

㉗ $x = \frac{-3a+c}{3}$

(PART G)

㉘ 47

㉙ $\frac{1}{36}$

㉚ 206

㉛ 7

㉜ $\frac{27}{64}$

㉝ 1

