Name: _____ Class: _____ Date: _____ ID: A

Ms. Chan **Algebra 2 FINAL EXAM Review** **2006**

Multiple Choice
Identify the letter of the choice that best completes the statement or answers the question.

To which sets of numbers does the number belong?

____ 1. $\sqrt{63}$
a. irrational numbers, real numbers b. whole numbers, integers, rational numbers, real numbers
c. rational numbers, irrational numbers d. integers, rational numbers, real numbers

Insert <, >, or = to make the sentence true.

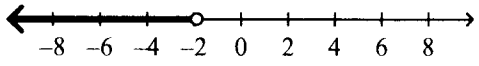
____ 2. $\frac{1}{2}$ ■ $\frac{5}{9}$
a. = b. < c. >

____ 3. $|6 - 7|$ ■ $|5 + 8|$
a. < b. = c. >

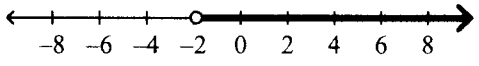
Solve the inequality. Graph the solution set.

____ 4. $2(2b + 3) < -9 + 4b$

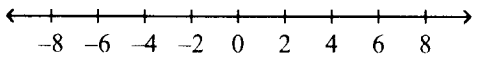
a. $b < -1\frac{7}{8}$



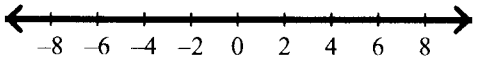
b. $b > -1\frac{7}{8}$



c. no solutions



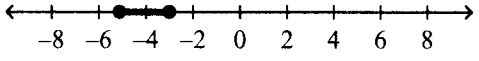
d. all real numbers



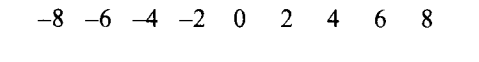
Solve the compound inequality. Graph the solution set.

____ 5. $9x + 4 \geq -50$ and $10x - 14 \leq -24$

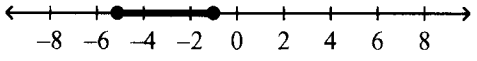
a. $x \geq -5\frac{1}{9}$ or $x \leq -3\frac{4}{5}$



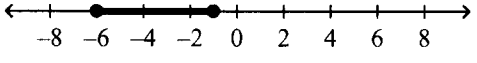
b. $x \geq -6$ and $x \leq -3\frac{4}{5}$



c. $x \geq -5\frac{1}{9}$ or $x \leq -1$

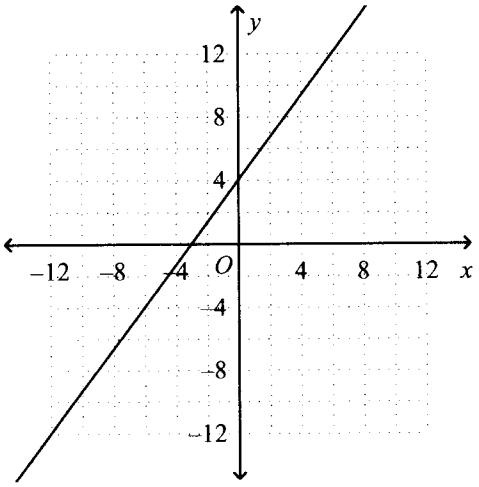


d. $x \geq -6$ and $x \leq -1$

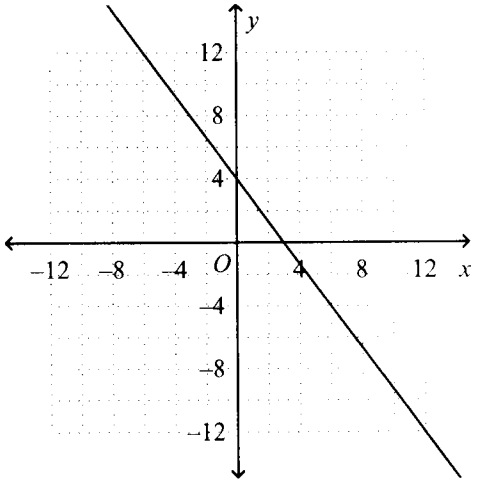


____ 9. Graph the equation $-4x - 3y = 12$.

a.



b.



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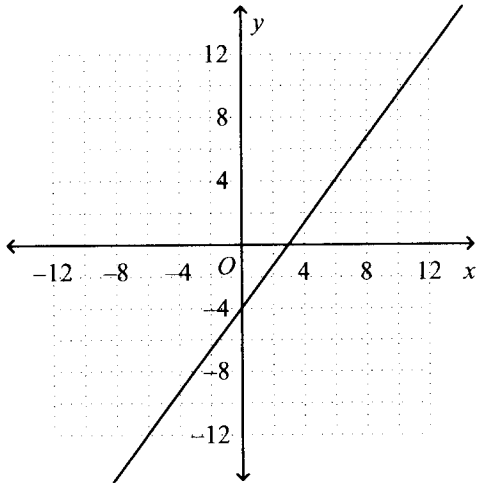
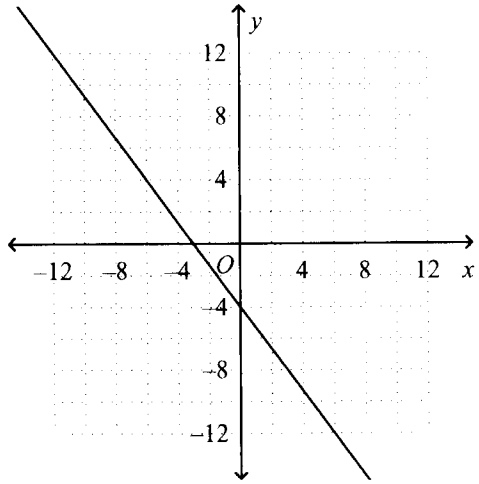


d.



Find the slope of the line through the pair of points.

____ 10. (7, –1) and (12, –12)

a. $-\frac{11}{5}$ b. $-\frac{5}{11}$ c. $\frac{5}{11}$ d. $\frac{11}{5}$

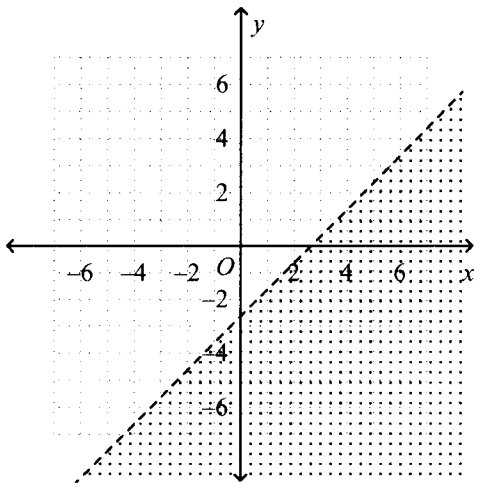
____ 11. Find the point-slope form of the equation of the line passing through the points (–3, 8) and (1, –8).

a. $y - 8 = 4(x - 1)$ b. $y - 8 = 4(x + 3)$ c. $y + 8 = -4(x + 3)$ d. $y - 8 = -4(x + 3)$

Graph the inequality.

____ 12. $-3x - 3y < 8$

a.



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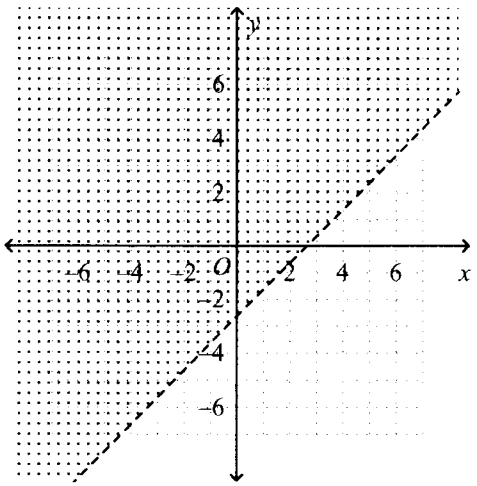
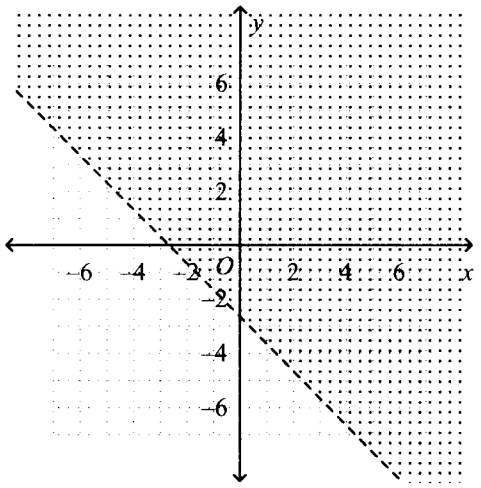


c.



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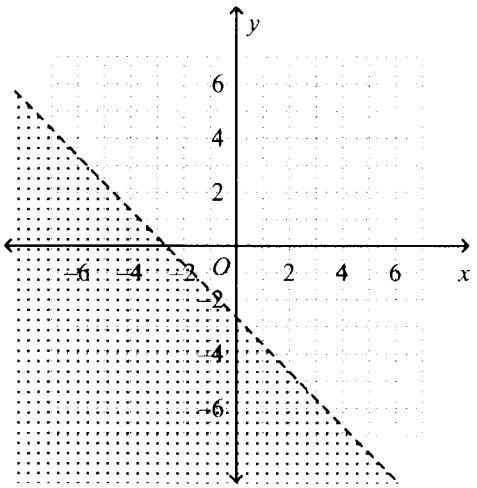


Use the elimination method to solve the system.

____ 13. $\begin{cases} -2x - 4y = -4 \\ 2x - 2y = -2 \end{cases}$

a. (0, 1) b. (−3, −1) c. (1, 0) d. (−1, −3)

____ 14. $\begin{cases} 3x + 7y = -19 \\ 5x - 6y = -14 \end{cases}$

a. (−4, −1) b. (4, 1) c. (1, 4) d. (−1, −4)

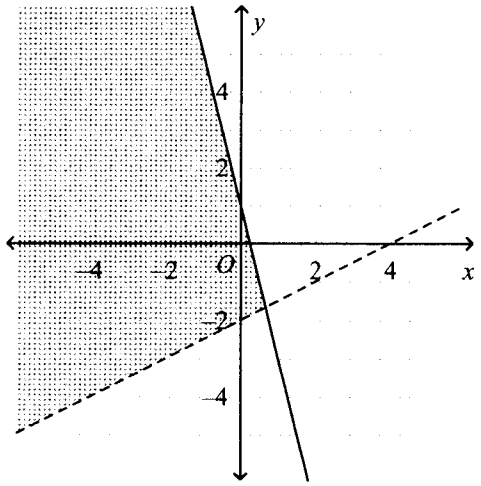
____ 15. $\begin{cases} -x + y + 3z = 10 \\ 3x + y - z = 6 \\ -x - 2y - z = -5 \end{cases}$

a. (5, –3, 6) b. (–5, –3, 6) c. (5, –3, –6) d. (5, 3, 6)

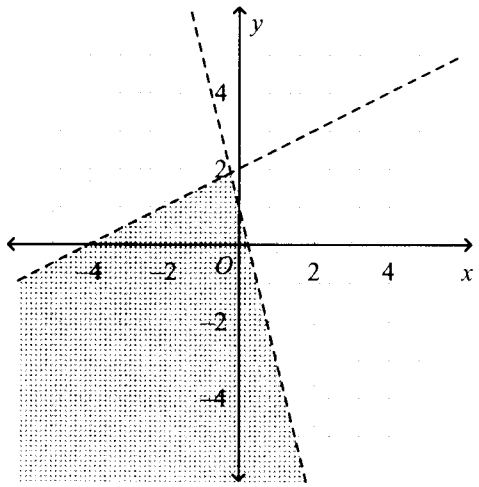
Solve the system of inequalities by graphing.

____ 16. $\begin{cases} y \geq -4x + 1 \\ y \leq \frac{1}{2}x + 2 \end{cases}$

a.



b.



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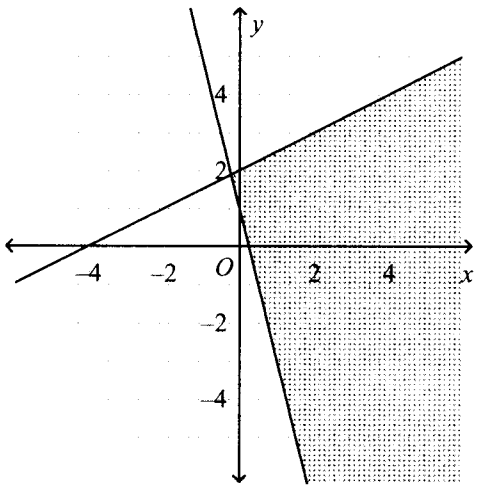
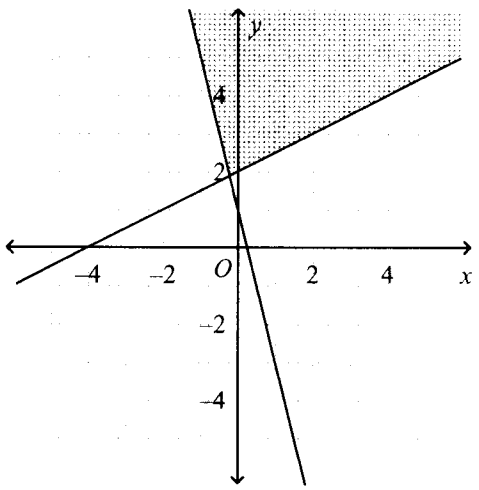


d.



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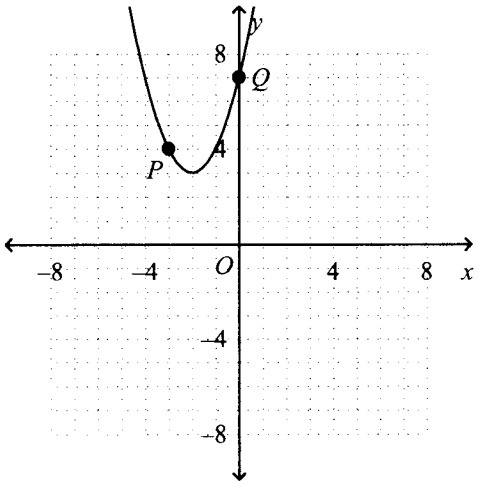
Identify the vertex and the axis of symmetry of the parabola. Identify points corresponding to *P* and *Q*.

____ 17.



a. (–2, 3), $x = -2$
P′(–1, 4), *Q*′(–4, 7)

b. (3, –2), $x = 3$
P′(–1, 4), *Q*′(–4, 7)

c. (3, –2), $x = 3$
P′(–3, 4), *Q*′(4, 3)

d. (–2, 3), $x = -2$
P′(–3, 4), *Q*′(4, 3)

Factor the expression.

____ 18. $5x^2 + 3x$
a. $x(5x + 3)$ b. $5x(x + 3)$ c. $x(5x + 3)$ d. $5x(x + 1 + 3)$

____ 19. $-9x^2 + 6x - 9$
a. $3(-3x^2 + 2x - 3)$ b. $-9x^2 + 6x - 9$ c. $-3(3x^2 + 6x - 9)$ d. $-9x(-3x + 2)$

____ 20. $2x^2 + 17x + 21$
a. $(2x + 7)(x - 3)$ b. $(2x + 3)(x - 7)$ c. $(x + 3)(2x + 7)$ d. $(2x + 3)(x + 7)$

____ 21. $5x^2 - 8x - 4$
a. $(x + 2)(5x - 2)$ b. $(5x + 2)(x + 2)$ c. $(5x + 2)(x - 2)$ d. $(5x - 2)(x - 2)$

____ 22. $4x^2 - 9$
a. $(2x - 3)^2$ b. $(2x + 3)(2x - 3)$ c. $(2x + 3)(-2x - 3)$ d. $(-2x + 3)(2x - 3)$

____ 23. $x^3 + 125$
a. $(x + 5)(x^2 + 5x + 50)$ b. $(x - 5)(x^2 + 5x + 25)$ c. $(x - 5)(x^2 - 5x + 25)$ d. $(x + 5)(x^2 - 5x + 25)$

____ 24. $x^4 - 13x^2 + 36$
a. $(x - 2)(x - 2)(x + 3)(x + 3)$ b. no solution c. $(x - 2)(x + 2)(x - 3)(x + 3)$ d. $(x - 2)(x - 3)(x^2)$

____ 25. Solve by factoring.
$3x^2 - 10x - 8 = 0$
a. $-4, \frac{3}{4}$ b. $-\frac{2}{3}, \frac{3}{4}$ c. 4, 3 d. $4, -\frac{2}{3}$

Solve the equation by finding square roots.

____ 26. $5x^2 = 80$

a. 4, –4 b. 4 c. $\frac{-\sqrt{80}}{5}, \frac{\sqrt{80}}{5}$ d. $-\sqrt{16}, \sqrt{80}$

____ 27. Simplify $\sqrt{-48}$ using the imaginary number i.

a. $4i\sqrt{3}$ b. $4\sqrt{-3}$ c. $i\sqrt{48}$ d. $-4\sqrt{3}$

____ 28. $1 - \sqrt{-24}$

a. $1 + 2i\sqrt{6}$ b. $-1 - 2i\sqrt{6}$ c. $1 - 2i\sqrt{6}$ d. $-1 + i\sqrt{24}$

Simplify the expression.

____ 29. $(-4 - 2i)(2 - 5i)$

a. $-18 + 16i$ b. $-8 + 10i$ c. $-8 + 16i$ d. $2 + 16i$

Use the Quadratic Formula to solve the equation.

____ 30. $4x^2 - 3x - 3 = 0$

a. $\frac{3}{8} \pm \frac{\sqrt{28}}{2}$ b. $\frac{3}{8} \pm \frac{\sqrt{57}}{8}$ c. $\frac{3}{4} \pm \frac{\sqrt{57}}{4}$ d. $\frac{8}{3} \pm \frac{\sqrt{114}}{8}$

____ 31. Divide $2x^3 + x^2 - 3x + 4$ by $x + 3$.

a. $2x^2 - 5x + 12$, R –32 b. $2x^2 - 5x + 12$ c. $2x^2 + 7x - 18$, R 40 d. $2x^2 + 7x - 18$

Divide using synthetic division.

____ 32. $(x^4 + 8x^3 - 22x^2 + 18x - 28) \div (x - 2)$

a. $x^3 - 12x^2 - 18x - 10$ b. $x^3 - 2x^2 + 14x + 10$ c. $x^3 + 8x^2 - 12x - 10$ d. $x^3 + 10x^2 - 2x + 14$

____ 33. Use synthetic division to find $P(4)$ for $P(x) = x^4 + 3x^3 - 2x^2 + 5x - 3$.

a. 25 b. 79 c. 4 d. 433

____ 34. Use the Rational Root Theorem to list all possible rational roots of the polynomial equation $x^3 + 4x^2 - 4x + 9 = 0$. Do not find the actual roots.

a. –9, –1, 1, 9 b. 1, 3, 9 c. –9, –3, –1, 1, 3, 9 d. no roots

____ 35. In how many different orders can you line up 3 cards on a shelf?

a. 3 b. 6 c. 1 d. 9

Evaluate the expression.

____ 36. 4!

a. 24 b. 6 c. 120 d. 10

____ 37. ${}_8P_6$

a. 20,160 b. 8 c. 28 d. 40,320

____ 38. ${}_5C_3$

a. 10 b. 5 c. 60 d. 1

____ 39. $\dfrac{{}_{60}C_3}{{}_{15}C_3}$

a. 14,190 b. 4 c. 8,555 d. $\dfrac{6844}{91}$

Use Pascal's Triangle to expand the binomial.

____ 40. $(s - 3v)^5$

a. $s^5 - 5s^4v + 10s^3v^2 - 10s^2v^3 + 5sv^4 - v^5$ b. $s^5 - 15s^4 + 90s^3 - 270s^2 + 405s - 243$
c. $s^5 - 15s^4v + 90s^3v^2 - 270s^2v^3 + 405sv^4 - 243v^5$
d. $s^5 + 45s^4v - 270s^3v^2 + 810s^2v^3 - 1215sv^4 + 729v^5$

____ 41. Use the Binomial Theorem to expand $(d - 3b)^3$.

a. $d^3 - 3d^2b + 3db^2 - b^3$ b. $d^3 + 3d^2b + 3db^2 + b^3$ c. $d^3 + 9d^2b + 27db^2 + 27b^3$
d. $d^3 - 9d^2b + 27db^2 - 27b^3$

Simplify the radical expression. Use absolute value symbols if needed.

____ 42. $\sqrt[4]{625x^{28}y^8}$

a. $5x^7|y^2|$ b. $25x^{49}|y^4|$ c. $5|x^7|y^2$ d. $25|x^{49}|y^4$

Multiply and simplify if possible.

____ 43. $\sqrt[4]{10} \cdot \sqrt[4]{-10}$

a. -10 b. 10 c. $10\sqrt[4]{-10}$ d. not possible

____ 44. Multiply and simplify $\sqrt[3]{3x^7} \cdot \sqrt[3]{6x^8}$. Assume that all variables are positive.

a. $x^5 \cdot \sqrt[3]{18}$ b. $\sqrt[3]{18x^{15}}$ c. $x^5 \cdot \sqrt[3]{18x^{15}}$ d. none of these

Divide and simplify.

____ 45. $\dfrac{\sqrt[3]{675}}{\sqrt[3]{5}}$

a. $3\sqrt[3]{5}$ b. $\sqrt[3]{675}$ c. $3\sqrt{5}$ d. $5\sqrt[3]{3}$

Rationalize the denominator of the expression. Assume that all variables are positive.

____ 46. $\dfrac{\sqrt[3]{7}}{\sqrt[3]{6}}$

a. $\dfrac{\sqrt[3]{42}}{6}$ b. $\dfrac{\sqrt[3]{252}}{6}$ c. $6\sqrt[3]{42}$ d. none of these

Add if possible.

____ 47. $3\sqrt[3]{10x} + 4\sqrt[3]{10x}$

a. $70\sqrt[3]{10x}$ b. $7\sqrt[3]{20x}$ c. $7\sqrt[3]{10x}$ d. not possible to simplify

Subtract if possible.

____ 48. $5\sqrt[3]{3a} - 2\sqrt[3]{3a}$

a. $3\sqrt[3]{3a}$ b. $9\sqrt[3]{3a}$ c. $7\sqrt[3]{3a}$ d. not possible to simplify

Simplify.

____ 49. $-\sqrt{3} - 6\sqrt{4} - 3\sqrt{3}$

a. $-4\sqrt{3} - 12$ b. $-4\sqrt{3} - 6\sqrt{4}$ c. $4\sqrt{3} - 12$ d. none of these

____ 50. $8^{\frac{4}{3}}$

a. 16 b. $\sqrt[3]{8^4}$ c. 4,096 d. 512

Multiply.

____ 51. $\left(-5 - \sqrt{5}\right)\left(-4 + \sqrt{5}\right)$

a. $-14 - 9\sqrt{5}$ b. $25 + 20\sqrt{5}$ c. $15 + 20\sqrt{5}$ d. $15 - \sqrt{5}$

____ 52. Write $(8a^{-3})^{-\frac{4}{3}}$ in simplest form.

a. $\frac{a^4}{16}$ b. $16a^4$ c. $\frac{1}{16a^4}$ d. none of these

Solve the equation.

____ 53. $(x + 10)^{\frac{3}{4}} = -8$

a. -1 b. 2 c. -18 d. -1

____ 54. Let $f(x) = -3x - 7$ and $g(x) = 2x + 4$. Find $(f \circ g)(3)$.

a. 10 b. -16 c. -37 d. -28

State the property or properties of logarithms used to rewrite the expression.

____ 55. $\log_5 8 + \log_5 4 = \log_5 32$

a. Quotient Property b. Product Property c. Power Property d. Addition Property

Write the expression as a single logarithm.

____ 56. $5\log_b v + 4\log_b t$

a. $\log_b\left(vt^{5+4}\right)$ b. $(5+4)\log_b(v+t)$ c. $\log_b\left(v^5+t^4\right)$ d. $\log_b(v^5t^4)$

Expand the logarithmic expression.

____ 57. $\log_8 \frac{k}{11}$

a. $-k\log_8 11$ b. $\log_8 k - \log_8 11$ c. $\frac{\log_8 k}{\log_8 11}$ d. $\log_8 11 - \log_8 k$

____ 58. $\log_4 11q^4$

a. $11\log_4 q^4$ b. $\log_4 11 + 4\log_4 q$ c. $\log_4 11 - 4\log_4 q$ d. $\log_4 11 \cdot 4\log_4 q$

____ 59. Use the Change of Base Formula to evaluate $\log_4 63$. Then convert $\log_4 63$ to a logarithm in base 2. Round to the nearest thousandth.

a. 2.989; $\log_2 7.937$ b. 2.989; $\log_2 31.5$ c. 1.799; $\log_2 31.5$ d. 4.143; $\log_2 7.937$

Write the expression as a single natural logarithm.

____ 60. $2\ln 2 + 2\ln x$

a. $\ln 4x^2$ b. $\ln(4+x^2)$ c. $\ln 4x^2$ d. $\ln 8x$

Simplify the rational expression. State any restrictions on the variable.

____ 61. $\frac{q^2+9q+14}{q^2+5q+6}$

a. $\frac{q+7}{q+3}; q \neq -2, q \neq 3$ b. $\frac{q+7}{q+3}; q \neq -2, q \neq -3$ c. $\frac{-(q+7)}{q+3}; q \neq -3$

d. $\frac{-(q+7)}{q+3}; q \neq -2, q \neq -3$

____ 62. $\frac{n^4-9n^2+8}{n^4-13n^2+40}$

a. $\frac{n^2-1}{n^2-5}; n \neq \pm 2\sqrt{2}, n \neq \pm\sqrt{5}$

b. $\frac{-(n^2-1)}{n^2-5}; n \neq \pm 2\sqrt{2}, n \neq \pm\sqrt{5}$

c. $\frac{n^2-1}{n^2-5}; n \neq 8, n \neq -5$

d. $\frac{n^2-1}{n^2-5}; n \neq 8, n \neq 5$

Multiply or divide. State any restrictions on the variables.

____ 63. $\dfrac{w^2}{w-6} \cdot \dfrac{w^2-12w+36}{w^2-5w}$

a. $\dfrac{w-6}{w-5}$, $w \neq 6, 5$ b. $\dfrac{w^2-6w}{w-5}$, $w \neq 6, 0, 5$ c. $\dfrac{w^2-6w}{w-5}$, $w \neq 6, 5$ d. $\dfrac{w-6}{w-5}$, $w \neq 6, 0, 5$

____ 64. $\dfrac{g+6}{g-5} \div \dfrac{g+1}{g^2-10g+25}$

a. $\dfrac{(g+6)(g-5)}{g+1}$, $g \neq 5, -1$ b. $\dfrac{(g+6)(g+1)}{(g-5)^2(g-5)}$, $g \neq 5, 5$ c. $\dfrac{(g+6)(g+1)}{(g-5)^2(g-5)}$, $g \neq 5, 5, -1$

d. $\dfrac{(g+6)(g-5)}{g+1}$, $g \neq 5, -1$

____ 65. $\dfrac{x^2-16}{x^2+5x+6} \div \dfrac{x^2+5x+4}{x^2-2x-8}$

a. $\dfrac{(x-4)^2}{(x+3)(x+1)}$; $x \neq -3, -1$ b. $\dfrac{(x+4)^2(x+1)}{(x+2)^2(x+3)}$; $x \neq -3, -2, 4$

c. $\dfrac{(x-4)^2}{(x+3)(x+1)}$; $x \neq -4, -3, -2, -1, 4$ d. $\dfrac{1}{(x+3)(x+1)}$; $x \neq -4, -3, -2, -1, 4$

____ 66. Find the least common multiple of $x^2+3x-18$ and x^2+5x-6.
a. $(x-3)(x+1)(x+6)$ b. $(x+3)(x+6)(x+1)$ c. $(x+6)(x-1)(x+3)$ d. $(x-3)(x+6)(x-1)$

Add or subtract. Simplify if possible.

____ 67. $\dfrac{2}{p-9} + \dfrac{8}{p^2-81}$

a. $\dfrac{10}{(p-9)(p+9)}$ b. $\dfrac{2p+26}{(p-9)(p+9)}$ c. $\dfrac{10}{p^2+p-90}$ d. $\dfrac{2p-10}{(p-9)(p+9)}$

____ 68. $\dfrac{c^2-11c+30}{c^2-14c+48} - \dfrac{2}{c-8}$

a. $c-7$ b. $\dfrac{c-5}{c-8}$ c. $\dfrac{c-7}{c-8}$ d. $\dfrac{c^2-11c+28}{c^2-14c+48}$

____ 69. $\dfrac{z^2-13z+40}{z^2-2z-15} + \dfrac{3}{z+3}$

a. $\dfrac{z-5}{z+3}$ b. $\dfrac{z-8}{z+3}$ c. $z-5$ d. $\dfrac{z^2-13z+43}{z^2-2z-15}$

____ 70. $\dfrac{k^2 - 6k - 7}{k^2 - 3k - 28} + \dfrac{k^2 + 5k + 4}{k^2 + 9k + 8}$

a. $\dfrac{2k^2 - k - 3}{(k + 4)(k + 8)}$ b. $\dfrac{2k^2 + 17k + 24}{(k + 4)(k + 8)}$ c. $\dfrac{k^2 + 17k + 24}{(k + 4)(k + 8)}$ d. $\dfrac{2k^2 - k - 3}{2k^2 + 6k - 20}$

Simplify the complex fraction.

____ 71. $\dfrac{\dfrac{4}{5x} - \dfrac{2}{5x}}{\dfrac{3}{4x} + \dfrac{2}{3x}}$

a. $\dfrac{85}{24}$ b. $\dfrac{24}{85}$ c. $\dfrac{7}{25}$ d. $\dfrac{25}{7}$

____ 72. $\dfrac{\dfrac{z - 2}{z^2 + 9z + 8}}{\dfrac{z + 2}{z + 8}}$

a. $\dfrac{(z - 2)(z + 2)}{(z + 8)(z + 1)}$ b. $\dfrac{z - 2}{(z + 2)(z + 1)}$ c. $\dfrac{(z - 2)(z + 1)}{(z + 2)(z - 1)}$ d. $\dfrac{(z - 2)(z + 2)}{(z + 8)^2(z + 1)}$

Solve the equation. Check the solution.

____ 73. $\dfrac{4}{x - 5} = \dfrac{5}{x - 1}$

a. $-\dfrac{21}{4}$ b. 24 c. 21 d. 25

____ 74. $\dfrac{k + 6}{k - 5} = \dfrac{k - 8}{k + 2}$

a. $\dfrac{4}{3}$ b. $\dfrac{52}{11}$ c. $-\dfrac{52}{11}$ d. $\dfrac{52}{21}$

____ 75. $\dfrac{8}{3p} + \dfrac{2}{5p} = -2$

a. $\dfrac{46}{15}$ b. $-\dfrac{5}{8}$ c. $-\dfrac{17}{15}$ d. $-\dfrac{23}{15}$

Ms. Chan **Algebra 2 FINAL EXAM Review** **2006**
Answer Section

MULTIPLE CHOICE

1. ANS: A DIF: L1 REF: 1-1 Properties of Real Numbers
   OBJ: 1-1.1 Graphing and Ordering Real Numbers
   STO: FL MA.A.1.4.2, FL MA.A.1.4.4, FL MA.A.2.4.2
2. ANS: B DIF: L1 REF: 1-1 Properties of Real Numbers
   OBJ: 1-1.1 Graphing and Ordering Real Numbers
   STO: FL MA.A.1.4.2, FL MA.A.1.4.4, FL MA.A.2.4.2
3. ANS: A DIF: L2 REF: 1-1 Properties of Real Numbers
   OBJ: 1-1.2 Properties of Real Numbers STO: FL MA.A.1.4.2, FL MA.A.1.4.4, FL MA.A.2.4.2
4. ANS: C DIF: L1 REF: 1-4 Solving Inequalities
   OBJ: 1-4.1 Solving and Graphing Inequalities
   STO: FL MA.A.1.4.2, FL MA.A.3.4.1, FL MA.D.1.4.1
5. ANS: D DIF: L1 REF: 1-4 Solving Inequalities
   OBJ: 1-4.2 Compound Inequalities STO: FL MA.A.1.4.2, FL MA.A.3.4.1, FL MA.D.1.4.1
6. ANS: A DIF: L1 REF: 1-4 Solving Inequalities
   OBJ: 1-4.2 Compound Inequalities STO: FL MA.A.1.4.2, FL MA.A.3.4.1, FL MA.D.1.4.1
7. ANS: D DIF: L1 REF: 1-5 Absolute Value Equations and Inequalities
   OBJ: 1-5.2 Absolute Value Inequalities STO: FL MA.A.1.4.2, FL MA.A.1.4.4, FL MA.D.1.4.1
8. ANS: C DIF: L2 REF: 2-1 Relations and Functions
   OBJ: 2-1.2 Identifying Functions STO: FL MA.A.1.4.3, FL MA.D.1.4.1, FL MA.E.1.4.1
9. ANS: D DIF: L2 REF: 2-2 Linear Equations
   OBJ: 2-2.1 Graphing Linear Equations STO: FL MA.C.2.4.1, FL MA.D.1.4.1, FL MA.D.1.4.2
10. ANS: A DIF: L1 REF: 2-2 Linear Equations
    OBJ: 2-2.1 Graphing Linear Equations STO: FL MA.C.2.4.1, FL MA.D.1.4.1, FL MA.D.1.4.2
11. ANS: D DIF: L1 REF: 2-2 Linear Equations
    OBJ: 2-2.2 Writing Equations of Lines STO: FL MA.C.2.4.1, FL MA.D.1.4.1, FL MA.D.1.4.2
12. ANS: C DIF: L1 REF: 2-7 Two-Variable Inequalities
    OBJ: 2-7.1 Graphing Linear Inequalities STO: FL MA.A.2.4.1, FL MA.D.1.4.1
13. ANS: A DIF: L1 REF: 3-2 Solving Systems Algebraically
    OBJ: 3-2.2 Solving Systems by Elimination STO: FL MA.A.3.4.2, FL MA.D.2.4.2
14. ANS: A DIF: L1 REF: 3-2 Solving Systems Algebraically
    OBJ: 3-2.2 Solving Systems by Elimination STO: FL MA.A.3.4.2, FL MA.D.2.4.2
15. ANS: A DIF: L1 REF: 3-6 Systems With Three Variables
    OBJ: 3-6.1 Solving Three-Variable Systems by Elimination
    STO: FL MA.C.2.4.2, FL MA.C.3.4.2, FL MA.D.2.4.2
16. ANS: C DIF: L1 REF: 3-3 Systems of Inequalities
    OBJ: 3-3.1 Solving Systems of Inequalities STO: FL MA.A.2.4.1, FL MA.D.2.4.2
17. ANS: A DIF: L1 REF: 5-1 Modeling Data With Quadratic Functions
    OBJ: 5-1.1 Quadratic Functions and Their Graphs
    STO: FL MA.A.4.4.1, FL MA.D.1.4.1, FL MA.E.1.4.1
18. ANS: C DIF: L1 REF: 5-4 Factoring Quadratic Expressions
    OBJ: 5-4.1 Finding Common and Binomial Factors STO: FL MA.A.3.4.3

19. ANS: A DIF: L1 REF: 5-4 Factoring Quadratic Expressions
OBJ: 5-4.1 Finding Common and Binomial Factors STO: FL MA.A.3.4.3
20. ANS: D DIF: L1 REF: 5-4 Factoring Quadratic Expressions
OBJ: 5-4.1 Finding Common and Binomial Factors STO: FL MA.A.3.4.3
21. ANS: C DIF: L1 REF: 5-4 Factoring Quadratic Expressions
OBJ: 5-4.1 Finding Common and Binomial Factors STO: FL MA.A.3.4.3
22. ANS: B DIF: L1 REF: 5-4 Factoring Quadratic Expressions
OBJ: 5-4.2 Factoring Special Expressions STO: FL MA.A.3.4.3
23. ANS: D DIF: L1 REF: 6-4 Solving Polynomial Equations
OBJ: 6-4.2 Solving Equations by Factoring STO: FL MA.A.2.4.3, FL MA.A.3.4.2
24. ANS: C DIF: L1 REF: 6-4 Solving Polynomial Equations
OBJ: 6-4.2 Solving Equations by Factoring STO: FL MA.A.2.4.3, FL MA.A.3.4.2
25. ANS: D DIF: L1 REF: 5-5 Quadratic Equations
OBJ: 5-5.1 Solving by Factoring and Finding Square Roots
STO: FL MA.A.3.4.2, FL MA.A.3.4.3, FL MA.C.3.4.1
26. ANS: A DIF: L1 REF: 5-5 Quadratic Equations
OBJ: 5-5.1 Solving by Factoring and Finding Square Roots
STO: FL MA.A.3.4.2, FL MA.A.3.4.3, FL MA.C.3.4.1
27. ANS: A DIF: L1 REF: 5-6 Complex Numbers
OBJ: 5-6.1 Identifying Complex Numbers
STO: FL MA.A.1.4.1, FL MA.A.2.4.3, FL MA.A.3.4.1
28. ANS: C DIF: L1 REF: 5-6 Complex Numbers
OBJ: 5-6.1 Identifying Complex Numbers
STO: FL MA.A.1.4.1, FL MA.A.2.4.3, FL MA.A.3.4.1
29. ANS: A DIF: L1 REF: 5-6 Complex Numbers
OBJ: 5-6.2 Operations With Complex Numbers
STO: FL MA.A.1.4.1, FL MA.A.2.4.3, FL MA.A.3.4.1
30. ANS: B DIF: L1 REF: 5-8 The Quadratic Formula
OBJ: 5-8.1 Using the Quadratic Formula STO: FL MA.A.2.4.3, FL MA.A.3.4.3, FL MA.C.3.4.1
31. ANS: A DIF: L1 REF: 6-3 Dividing Polynomials
OBJ: 6-3.1 Using Long Division STO: FL MA.A.3.4.2
32. ANS: D DIF: L2 REF: 6-3 Dividing Polynomials
OBJ: 6-3.2 Using Synthetic Division STO: FL MA.A.3.4.2
33. ANS: D DIF: L1 REF: 6-3 Dividing Polynomials
OBJ: 6-3.2 Using Synthetic Division STO: FL MA.A.3.4.2
34. ANS: C DIF: L1 REF: 6-5 Theorems About Roots of Polynomial Equations
OBJ: 6-5.1 The Rational Root Theorem STO: FL MA.A.2.4.3, FL MA.A.3.4.2, FL MA.D.1.4.1
35. ANS: B DIF: L1 REF: 6-7 Permutations and Combinations
OBJ: 6-7.1 Permutations STO: FL MA.A.1.4.3, FL MA.D.1.4.1
36. ANS: A DIF: L1 REF: 6-7 Permutations and Combinations
OBJ: 6-7.1 Permutations STO: FL MA.A.1.4.3, FL MA.D.1.4.1
37. ANS: A DIF: L1 REF: 6-7 Permutations and Combinations
OBJ: 6-7.1 Permutations STO: FL MA.A.1.4.3, FL MA.D.1.4.1
38. ANS: A DIF: L1 REF: 6-7 Permutations and Combinations
OBJ: 6-7.2 Combinations STO: FL MA.A.1.4.3, FL MA.D.1.4.1
39. ANS: D DIF: L3 REF: 6-7 Permutations and Combinations
OBJ: 6-7.2 Combinations STO: FL MA.A.1.4.3, FL MA.D.1.4.1

40. ANS: C DIF: L1 REF: 6-8 The Binomial Theorem
OBJ: 6-8.1 Binomial Expansion and Pascal's Triangle STO: FL MA.A.3.4.3, FL MA.D.1.4.1
41. ANS: D DIF: L1 REF: 6-8 The Binomial Theorem
OBJ: 6-8.2 The Binomial Theorem STO: FL MA.A.3.4.3, FL MA.D.1.4.1
42. ANS: C DIF: L2 REF: 7-1 Roots and Radical Expressions
OBJ: 7-1.1 Roots and Radical Expressions
STO: FL MA.A.1.4.1, FL MA.A.1.4.4, FL MA.A.3.4.1
43. ANS: D DIF: L1 REF: 7-2 Multiplying and Dividing Radical Expressions
OBJ: 7-2.1 Multiplying Radical Expressions
STO: FL MA.A.2.4.2, FL MA.A.3.4.1, FL MA.A.3.4.3
44. ANS: A DIF: L1 REF: 7-2 Multiplying and Dividing Radical Expressions
OBJ: 7-2.1 Multiplying Radical Expressions
STO: FL MA.A.2.4.2, FL MA.A.3.4.1, FL MA.A.3.4.3
45. ANS: A DIF: L1 REF: 7-2 Multiplying and Dividing Radical Expressions
OBJ: 7-2.2 Dividing Radical Expressions
STO: FL MA.A.2.4.2, FL MA.A.3.4.1, FL MA.A.3.4.3
46. ANS: A DIF: L1 REF: 7-2 Multiplying and Dividing Radical Expressions
OBJ: 7-2.2 Dividing Radical Expressions
STO: FL MA.A.2.4.2, FL MA.A.3.4.1, FL MA.A.3.4.3
47. ANS: C DIF: L1 REF: 7-3 Binomial Radical Expressions
OBJ: 7-3.1 Adding and Subtracting Radical Expressions
STO: FL MA.A.3.4.1, FL MA.A.3.4.2, FL MA.A.3.4.3
48. ANS: A DIF: L1 REF: 7-3 Binomial Radical Expressions
OBJ: 7-3.1 Adding and Subtracting Radical Expressions
STO: FL MA.A.3.4.1, FL MA.A.3.4.2, FL MA.A.3.4.3
49. ANS: A DIF: L1 REF: 7-3 Binomial Radical Expressions
OBJ: 7-3.1 Adding and Subtracting Radical Expressions
STO: FL MA.A.3.4.1, FL MA.A.3.4.2, FL MA.A.3.4.3
50. ANS: A DIF: L1 REF: 7-4 Rational Exponents
OBJ: 7-4.1 Simplifying Expressions with Rational Exponents
STO: FL MA.A.1.4.4, FL MA.A.2.4.2, FL MA.A.3.4.2
51. ANS: D DIF: L1 REF: 7-3 Binomial Radical Expressions
OBJ: 7-3.2 Multiplying and Dividing Binomial Radical Expressions
STO: FL MA.A.3.4.1, FL MA.A.3.4.2, FL MA.A.3.4.3
52. ANS: A DIF: L1 REF: 7-4 Rational Exponents
OBJ: 7-4.1 Simplifying Expressions with Rational Exponents
STO: FL MA.A.1.4.4, FL MA.A.2.4.2, FL MA.A.3.4.2
53. ANS: D DIF: L1 REF: 7-5 Solving Radical Equations
OBJ: 7-5.1 Solving Radical Equations STO: FL MA.A.3.4.1, FL MA.A.3.4.2
54. ANS: C DIF: L1 REF: 7-6 Function Operations
OBJ: 7-6.2 Composition of Functions STO: FL MA.A.2.4.2, FL MA.A.3.4.1, FL MA.D.1.4.1
55. ANS: B DIF: L1 REF: 8-4 Properties of Logarithms
OBJ: 8-4.1 Using the Properties of Logarithms
STO: FL MA.A.1.4.4, FL MA.A.3.4.1, FL MA.A.3.4.2
56. ANS: D DIF: L2 REF: 8-4 Properties of Logarithms
OBJ: 8-4.1 Using the Properties of Logarithms
STO: FL MA.A.1.4.4, FL MA.A.3.4.1, FL MA.A.3.4.2

57. ANS: B DIF: L1 REF: 8-4 Properties of Logarithms
OBJ: 8-4.1 Using the Properties of Logarithms
STO: FL MA.A.1.4.4, FL MA.A.3.4.1, FL MA.A.3.4.2
58. ANS: B DIF: L1 REF: 8-4 Properties of Logarithms
OBJ: 8-4.1 Using the Properties of Logarithms
STO: FL MA.A.1.4.4, FL MA.A.3.4.1, FL MA.A.3.4.2
59. ANS: A DIF: L1 REF: 8-5 Exponential and Logarithmic Equations
OBJ: 8-5.1 Solving Exponential Equations
STO: FL MA.A.1.4.4, FL MA.A.2.4.2, FL MA.A.3.4.1
60. ANS: A DIF: L1 REF: 8-6 Natural Logarithms
OBJ: 8-6.1 Natural Logarithms STO: FL MA.A.2.4.2, FL MA.A.3.4.2, FL MA.A.3.4.3
61. ANS: B DIF: L1 REF: 9-4 Rational Expressions
OBJ: 9-4.1 Simplifying Rational Expressions
STO: FL MA.A.2.4.2, FL MA.A.3.4.1, FL MA.A.3.4.2
62. ANS: A DIF: L2 REF: 9-4 Rational Expressions
OBJ: 9-4.1 Simplifying Rational Expressions
STO: FL MA.A.2.4.2, FL MA.A.3.4.1, FL MA.A.3.4.2
63. ANS: B DIF: L1 REF: 9-4 Rational Expressions
OBJ: 9-4.2 Multiplying and Dividing Rational Expressions
STO: FL MA.A.2.4.2, FL MA.A.3.4.1, FL MA.A.3.4.2
64. ANS: D DIF: L1 REF: 9-4 Rational Expressions
OBJ: 9-4.2 Multiplying and Dividing Rational Expressions
STO: FL MA.A.2.4.2, FL MA.A.3.4.1, FL MA.A.3.4.2
65. ANS: C DIF: L2 REF: 9-4 Rational Expressions
OBJ: 9-4.2 Multiplying and Dividing Rational Expressions
STO: FL MA.A.2.4.2, FL MA.A.3.4.1, FL MA.A.3.4.2
66. ANS: D DIF: L1 REF: 9-5 Adding and Subtracting Rational Expressions
OBJ: 9-5.1 Adding and Subtracting Rational Expressions
STO: FL MA.A.2.4.2, FL MA.A.3.4.1, FL MA.A.3.4.2
67. ANS: B DIF: L1 REF: 9-5 Adding and Subtracting Rational Expressions
OBJ: 9-5.1 Adding and Subtracting Rational Expressions
STO: FL MA.A.2.4.2, FL MA.A.3.4.1, FL MA.A.3.4.2
68. ANS: C DIF: L1 REF: 9-5 Adding and Subtracting Rational Expressions
OBJ: 9-5.1 Adding and Subtracting Rational Expressions
STO: FL MA.A.2.4.2, FL MA.A.3.4.1, FL MA.A.3.4.2
69. ANS: A DIF: L1 REF: 9-5 Adding and Subtracting Rational Expressions
OBJ: 9-5.1 Adding and Subtracting Rational Expressions
STO: FL MA.A.2.4.2, FL MA.A.3.4.1, FL MA.A.3.4.2
70. ANS: B DIF: L2 REF: 9-5 Adding and Subtracting Rational Expressions
OBJ: 9-5.1 Adding and Subtracting Rational Expressions
STO: FL MA.A.2.4.2, FL MA.A.3.4.1, FL MA.A.3.4.2
71. ANS: B DIF: L1 REF: 9-5 Adding and Subtracting Rational Expressions
OBJ: 9-5.2 Simplifying Complex Fractions
STO: FL MA.A.2.4.2, FL MA.A.3.4.1, FL MA.A.3.4.2
72. ANS: B DIF: L1 REF: 9-5 Adding and Subtracting Rational Expressions
OBJ: 9-5.2 Simplifying Complex Fractions
STO: FL MA.A.2.4.2, FL MA.A.3.4.1, FL MA.A.3.4.2

73. ANS: C DIF: L1 REF: 9-6 Solving Rational Equations
OBJ: 9-6.1 Solving Rational Equations STO: FL MA.A.3.4.1, FL MA.A.3.4.2
74. ANS: A DIF: L1 REF: 9-6 Solving Rational Equations
OBJ: 9-6.1 Solving Rational Equations STO: FL MA.A.3.4.1, FL MA.A.3.4.2
75. ANS: D DIF: L1 REF: 9-6 Solving Rational Equations
OBJ: 9-6.1 Solving Rational Equations STO: FL MA.A.3.4.1, FL MA.A.3.4.2