



COASTLINE COMMUNITY COLLEGE

NEW MATH PLACEMENT TEST REVIEW

To Coastline Students:

Do *NOT* take the Math Placement Test “cold.” It can only be taken once per year. Prepare carefully so you can be placed based on your true ability!

The test has forty questions that start easy and get harder, so your review should begin with basic arithmetic including fractions and decimals. Then work your way up. Do not use a calculator (calculators are not allowed during the placement test).

We recommend the following to help you be successful on the test:

- **This Study Packet.** It consists of 226 problems with answers that cover the entire range of problems on the new Math Placement Test.
- **The Student Success Center.** Located on the first floor of the College Center in Fountain Valley, the Student Success Center offers an individualized computer-based assessment program that will identify any topics missing from your math background and prescribe a program to build up your skills in these areas. The Success Center is open Monday-Friday 9 a.m.-1 p.m. and Monday-Thursday 4-9 p.m. Call (714) 241-6285 for more information.
- **The CTOOLS Program.** The Coastline Tutoring Onsite and OnLine program provides help and support in person, over the phone, or by e-mail, fax, or MSN NetMeeting. They are located on the fourth floor of the College Center and are open five days and nights a week. Call (714) 241-6308 or visit <http://www.ctools.org> for more information.
- **Use a Textbook.** Contact a friend or you may already own a math textbook. Typically you will find Chapter Review and/or Tests at the end of each chapter, with answers, that can help you strengthen your skills on a particular topic at a particular level.
- **Use the Internet.** An Internet search engine can point you to a Website for reviewing your math skills. For help with algebra, for example, we recommend <http://www.purplemath.com>. Many others are available, including the textbook publisher’s own Websites.
- **Other Books.** There many commercial books that prepare students for tests such as the ACT, SAT, CBEST, GRE, etc. We recommend Cliff’s Math Review for Standardized Tests. It’s available for purchase for under \$10 in the Coastline Bookstore.

For further information or questions please feel free to contact Math Department Chair Fred Feldon at (714) 241-6209 Ext. 17322 or e-mail ffeldon@ccd.edu. Good luck, and let us know if we can help in any way!



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NEW MATH PLACEMENT TEST REVIEW

(SAMPLE PROBLEMS)

The following guidelines are provided to help you predict in which math class you might be placed.

- If you can correctly answer problems 1-40 you might be placed in Math 008 Prealgebra
- If you can correctly answer problems 1-50 you might be placed in Math 010 Elementary Algebra
- If you can correctly answer problems 1-79 you might be placed in Math 030 Intermediate Algebra
- If you can correctly answer problems 1-119 you might be placed in Math 100 Quantitative Reasoning: A Liberal Arts Math Course
- If you can correctly answer problems 1-145 you might be placed in Math 115 College Algebra, 120 Trigonometry, 140 Survey of Calculus, 150 Finite Math, or 160 Introduction to Statistics
- If you can correctly answer problems 1-184 you might be placed in Math 170 Precalculus
- If you can correctly answer problems 1-226 you might be placed in Math 180 Calculus I

1. $0.51 \times 3.4 =$

2. $38 \times 4.52 =$

3. $0.16 \times 2.5 =$

4. $7.8 \times 0.039 =$

5. $0.65 \times 18.4 =$

6. $3.8 + 4.7 =$

7. $17.2 + 7.46 =$

8. $23 + 2.76 =$

9. $6.34 - 5 =$

10. $12 - 5.29 =$

11. $7.68 - 2.8 =$

12. $14.5 - 7.9 =$

13. $1.6 - 0.72 =$

14. $18.5 \div 7.4 =$

15. $3.48 \div 0.4 =$
16. $0.824 \div 0.8 =$
17. $1/3 + 1/6 =$
18. $2/5 + 3/7 =$
19. $2/3 + 3/5 =$
20. $2/5 + 1/5 =$
21. $6/7 - 2/5 =$
22. $4/5 - 1/3 =$
23. $2/3 - 1/5 =$
24. $7/8 - 1/3 =$
25. $2/3 \div 4/3 =$
26. $20/7 \div 4/5 =$
27. $12 \div 3/8 =$
28. $4/7 \div 12 =$
29. $18 \div 6/5 =$
30. $14 \div 7/2 =$
31. $5 \times [7 - 2(3)] =$
32. $[9 - 3(2)] \times 4 =$
33. $[3 + 5(2) - 6] \times 7 =$
34. $3 \times [2(4) - 7 + 4] =$
35. $[6 - 2(3)] \times 5 =$
36. A swimming pool is 7 meters wide and 18 meters long. At \$15 per meter, how much will fencing around the outside of the pool cost?
37. A playground is 18 feet wide and 24 feet long. At \$12 per foot, how much will fencing around the outside of the playground cost?
38. A garden is 6 meters wide and 18 meters long. At \$10 per foot, how much will fencing around the outside of the garden cost?
39. A parking lot is 60 meters wide and 80 meters long. At \$15 per square meter, how much will it cost to pave the parking lot?
40. A swimming pool is 16 meters wide and 25 meters long. At \$50 per square meter, how much will a child-proof covering for the pool cost?
41. $6 - 3^2 \div 3(-3) =$
42. $-2^3 - 4^2 \div 2 =$

43. $4 - 5^2 - (2^3 \div 2) =$
44. $-6^2 - (5^3 \div 5) =$
45. $(-2)^3 - (3^2 \div 3) =$
46. Evaluate the expression $3a^2b$ if $a = -1$ and $b = -3$.
47. Evaluate the expression $-pq^2$ if $p = -2$ and $q = -3$.
48. Evaluate the expression $4a^2b$ if $a = -3$ and $b = -4$.
49. Evaluate the expression $5m^3n$ if $m = -2$ and $n = 2$.
50. Evaluate the expression $-2a^2b^3$ if $a = -2$ and $b = 1$.
51. Simplify by combining like terms: $3(x + 2y) - 2(3x - y) =$
52. Simplify by combining like terms: $-4(y - 2x) - 2(3x + y) =$
53. Simplify by combining like terms: $3(x - 5y) - 2(3y - 4x) =$
54. Simplify by combining like terms: $5(x + 2y) - 2(3x - y) =$
55. Simplify by combining like terms: $2(x - 3y) + 3(x - 4y) =$
56. $3^{-3} =$
57. $2^{-4} =$
58. $3^{-2} =$
59. $5^{-3} =$
60. $4^{-3} =$
61. Solve for x : $x - 5 = -(5 - 4x)$
62. Solve for x : $-5(x - 3) = 6 - 2x$
63. Solve for x : $2(x - 4) = -(3 - 5x)$
64. Solve for x : $-3(x - 4) = -(1 + 2x)$
65. Solve for x : $4(x - 2) = -4(3x - 2)$
66. The slope of the line through the points $(4, -5)$ and $(-3, 0)$ is:
67. The slope of the line through the points $(0, -1)$ and $(-2, 5)$ is:
68. The slope of the line through the points $(-3, 2)$ and $(-3, 6)$ is:
69. The slope of the line through the points $(1, -2)$ and $(2, 4)$ is:
70. The slope of the line through the points $(2, -3)$ and $(1, -3)$ is:
71. Multiply: $(3x - 4)(3x + 4) =$
72. Multiply: $(2a - 3)^2 =$
73. Multiply: $(3x - 5)(2x + 1) =$
74. Multiply: $(x + 2y)^2 =$

75. Multiply: $(a - 2b)(2a + 3b) =$
76. $-(-4a)^3 =$
77. $(3ab^3)^4 =$
78. $-(5a^3)^3 =$
79. $(2a^2b^2)^2 =$
80. $(2a^4b)^3 =$
81. One of the factors of $3x^2 + x$ is:
82. One of the factors of $x^2 + 9x + 20$ is:
83. One of the factors of $x^2 - 9$ is:
84. One of the factors of $x^2 - 5x - 6$ is:
85. One of the factors of $x^2 + 3x - 4$ is:
86. $\sqrt{12} + \sqrt{27} =$
87. $\sqrt{18} + \sqrt{32} =$
88. $\sqrt{50} + \sqrt{72} =$
89. $\sqrt{16} + \sqrt{36} =$
90. $3\sqrt{8} + \sqrt{32} =$
91. Solve the inequality for x : $2x + 5 > 7$
92. Solve the inequality for x : $3x - 8 < 10$
93. Solve the inequality for x : $5x - 3 \leq 2$
94. Solve the inequality for x : $4 - 3x \geq 10$
95. Solve the inequality for x : $11 > 5 - x$
96. Solve the inequality for x : $6 - 3(2 - x) < 2x + 5$
97. Solve the inequality for x : $4(2 - x) + 3 < 2x - 1$
98. Solve the inequality for x : $3x + 9 > 5 - 3(x - 1)$
99. Solve the inequality for x : $x - 4(2 - 3x) < 2x + 4$
100. Solve the inequality for x : $4x - 6 > 3(2 - x) - 2$
101. Simplify: $\frac{(x^3)^4}{x^2 x^5} =$
102. Simplify: $\frac{5x^3 x^2}{10(x^4)^3} =$

103. Simplify: $\frac{3b^2b^4}{(b^3)^2} =$
104. Simplify: $\frac{12(x^5)^2x}{8x^2x^3} =$
105. Simplify: $\frac{a^2a^4}{(a^3)^2} =$
106. Simplify: $\sqrt{m} + \sqrt{m} =$
107. Simplify: $\sqrt{2a} + 3\sqrt{2a} =$
108. Simplify: $3\sqrt{y} + \sqrt{3y} =$
109. Simplify: $\sqrt{8x} + \sqrt{2x} =$
110. Simplify: $\sqrt{12y} + 3\sqrt{3y} =$
111. Simplify: $\sqrt{4xy^3} =$
112. Simplify: $\sqrt{20x^3y^6} =$
113. Simplify: $\sqrt{18ab^2c^5} =$
114. Simplify: $\sqrt{200x^7} =$
115. If $D = RT$, then $T =$
116. If $P = 2A + 2B$, then $A =$
117. If $3m + 2n = k$, then $m =$
118. If $I = PRT$, then $P =$
119. If $2x - 3y = z$, then $y =$
120. If $x - 4y = 12$, then the y-intercept of the graph of this equation is:
121. If $3x + y = 12$, then the x-intercept of the graph of this equation is:
122. If $3x - 2y = 24$, then the y-intercept of the graph of this equation is:
123. If $2x + y = 7$, then the x-intercept of the graph of this equation is:
124. If $2x + 3y = 10$, then the y-intercept of the graph of this equation is:
125. Reduce: $\frac{4x - 8}{x^2 - 2x} =$
126. Reduce: $\frac{x^3 + x^2}{2x^2 + x} =$

127. Reduce: $\frac{4x^2 + 8}{x^3 + 2x} =$

128. Reduce: $\frac{3x - 9}{x^2 - 3x} =$

129. Reduce: $\frac{5x + 2x^2}{4x + 10} =$

130. Factor: $2x^2 - 8 =$

131. Factor: $3x^2 - 27 =$

132. Factor: $32 - 2x^2 =$

133. Factor: $50 - 2x^2 =$

134. Factor: $kx^2 - 9k =$

135. Add: $\frac{2}{x} + \frac{3}{x} =$

136. Add: $\frac{3}{x} + \frac{2}{y} =$

137. Subtract: $\frac{2b}{a} - \frac{3a}{b} =$

138. Multiply: $\frac{x}{2} \cdot \frac{4}{y} =$

139. Multiply: $\frac{2m}{3n^2} \cdot \frac{12n^5}{m^3} =$

140. Divide: $\frac{x^2 + 2x}{3} \div \frac{x^2 + 3x + 2}{6} =$

141. One of the roots of $x^2 - x - 1 = 0$ is:

142. One of the roots of $x^2 - 2x - 1 = 0$ is:

143. One of the roots of $x^2 + x - 4 = 0$ is:

144. One of the roots of $2x^2 - 3x - 2 = 0$ is:

145. One of the roots of $3x^2 + x - 1 = 0$ is:

146. The graph of $y = 3$ is a: (a) line (b) horizontal line (c) vertical line (d) parabola (e) circle (f) ellipse (g) hyperbola (h) none of the above

147. The graph of $2x + y = 6$ is a: (a) line (b) horizontal line (c) vertical line (d) parabola (e) circle (f) ellipse (g) hyperbola (h) none of the above

148. The graph of $2x^2 + y = 6$ is a: (a) line (b) horizontal line (c) vertical line (d) parabola (e) circle (f) ellipse (g) hyperbola (h) none of the above

149. The graph of $2x^2 + y^2 = 6$ is a: (a) line (b) horizontal line (c) vertical line (d) parabola (e) circle (f) ellipse (g) hyperbola (h) none of the above

150. The graph of $3x + y^2 = 0$ is a: (a) line (b) horizontal line (c) vertical line (d) parabola (e) circle (f) ellipse (g) hyperbola (h) none of the above

151. The graph of $x^2 + y^2 = 9$ is a: (a) line (b) horizontal line (c) vertical line (d) parabola (e) circle (f) ellipse (g) hyperbola (h) none of the above

152. The graph of $4x^2 - 9y^2 = 36$ is a: (a) line (b) horizontal line (c) vertical line (d) parabola (e) circle (f) ellipse (g) hyperbola (h) none of the above

153. The graph of $2x^{-2} + x^{-1} = 3$ is a: (a) line (b) horizontal line (c) vertical line (d) parabola (e) circle (f) ellipse (g) hyperbola (h) none of the above

154. The graph of $x^2 - y = 0$ is a: (a) line (b) horizontal line (c) vertical line (d) parabola (e) circle (f) ellipse (g) hyperbola (h) none of the above

155. Simplify: $\frac{2 - \frac{x}{y}}{2 + \frac{x}{y}} =$

156. Simplify: $\frac{x + \frac{x}{y}}{x - \frac{x}{y}} =$

157. Simplify: $\frac{\frac{3x}{y} + 2}{\frac{x}{y} - 2} =$

158. Simplify: $\frac{\frac{x}{2y} + 1}{\frac{x}{2y} - 1} =$

159. Simplify: $\frac{1 - \frac{x}{3y}}{1 + \frac{x}{y}} =$

160. If $3a + 2b - 4ab = 8$, then $b =$

161. If $2xy + 3y - 4x = 1$, then $x =$

162. If $4b - 2a - ab = 11$, then $a =$

163. If $3x - 2xy = 4y + 8$, then $y =$

164. If $5b + 2c = 3bc - 6$, then $c =$

165. Solve for x : $\log_3 27 = x$

166. Solve for x : $\log_5 x = 1$

167. Solve for x : $\log_x 16 = 4$

168. Solve for x : $\log x = 0$

169. Solve for x : $\log_4 \left(\frac{1}{4}\right) = x$

170. Solve for x : $|x - 3| > 2$

171. Solve for x : $|3x + 2| < 1$

172. Solve for x : $|3 - x| > 5$

173. Solve for x : $|4 + 2x| > 6$

174. Solve for x : $|2x - 5| \leq 3$

175. Find $f(-1)$ if $f(x) = 2x + 1$

176. Find $f(-3)$ if $f(x) = 3x^2 - x$

177. Find $f(2)$ if $f(x) = 4x^2 + 7$

178. Find $f(-2)$ if $f(x) = -x^2 + 4x + 1$

179. Find $f(3)$ if $f(x) = x^2 - x - 3$

180. The graphs of $3x - y = 2$ and $y = 2x - 1$ intersect at what point?

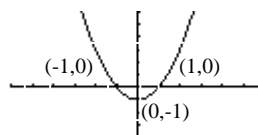
181. The graphs of $x - 2y = 3$ and $y = 2x - 4$ intersect at what point?

182. The graphs of $x = 2$ and $2y = x - 1$ intersect at what point?

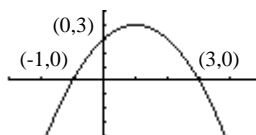
183. The graphs of $3x + y = 2$ and $y = 2x - 1$ intersect at what point?

184. The graphs of $3x + y = 1$ and $y = -2$ intersect at what point?

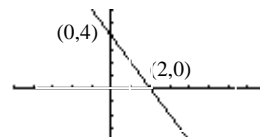
185. Which equation best describes this graph:



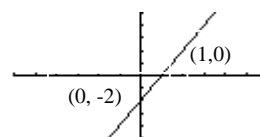
186. Which equation best describes this graph:



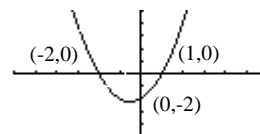
187. Which equation best describes this graph:



188. Which equation best describes this graph:



189. Which equation best describes this graph:



190. A square lot has an area of 200 square feet. If w represents the length of a side, then an equation that can be used to determine the value of w is:

191. A rectangular playground with area 480 square feet has a length that is two feet more than twice of its width. If w represents the width of the field, then an equation that can be used to determine the value of w is:

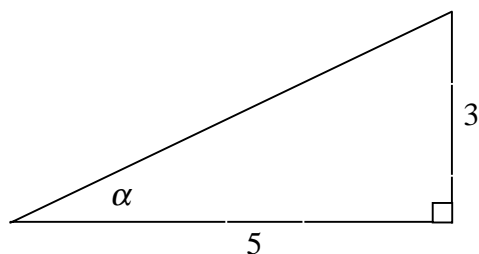
192. A triangle with area 175 square feet has a base that is three feet less than twice its height. If h represents the height of this triangle, then an equation that can be used to determine the value of h is:

193. A rectangular field with area 266 square feet has a width that is five feet less than its length. If w represents the width of the field, then an equation that can be used to determine the value of w is:

194. A rectangular pool with perimeter of 112 meters has a length that is four meters more than its width. If w represents the width of the pool, then an equation that can be used to determine the value of w is:

195. If $2^x = 8$, then the exact value of x is:

196. If $3^x = \frac{1}{9}$, then the exact value of x is:
197. If $8^x = 1$, then the exact value of x is:
198. If $5^x = 7$, then the exact value of x is:
199. If $3^x = 4$, then the exact value of x is:
200. If $f(x) = 3x - 1$ and $g(x) = x^2 + 3$, then $f(g(x)) =$
201. If $f(x) = 3/x$ and $g(x) = x^2 - 2$, then $f(g(x)) =$
202. If $f(x) = 2 - 3x$ and $g(x) = -x^2 + 4$, then $f(g(x)) =$
203. If $f(x) = 5x - 6$ and $g(x) = 1/x$, then $g(f(x)) =$
204. If $f(x) = 4x^2 - 1$ and $g(x) = 2 - x$, then $g(f(x)) =$
205. For an angle of $\frac{2\pi}{9}$ radians in standard position, the terminal side of the angle lies in which quadrant?
206. For an angle of $\frac{7\pi}{5}$ radians in standard position, the terminal side of the angle lies in which quadrant?
207. For an angle of $\frac{5\pi}{6}$ radians in standard position, the terminal side of the angle lies in which quadrant?
208. For an angle of $\frac{2\pi}{3}$ radians in standard position, the terminal side of the angle lies in which quadrant?
209. For an angle of $\frac{5\pi}{4}$ radians in standard position, the terminal side of the angle lies in which quadrant?



210. In the figure shown above, $\cos \alpha =$
211. In the figure shown above, $\sin \alpha =$
212. In the figure shown above, $\tan \alpha =$
213. In the figure shown above, $\cot \alpha =$
214. In the figure shown above, $\csc \alpha =$
215. Suppose θ is an angle in standard position with terminal side in the

second quadrant. If $\cos \theta = -\frac{4}{5}$, then $\sin \theta =$

216. Suppose θ is an angle in standard position with terminal side in the third quadrant. If $\cos \theta = -\frac{2}{3}$, then $\sin \theta =$

217. Suppose θ is an angle in standard position with terminal side in the fourth quadrant. If $\sin \theta = -\frac{4}{5}$, then $\tan \theta =$

218. Suppose θ is an angle in standard position with terminal side in the first quadrant. If $\sin \theta = \frac{4}{5}$, then $\cot \theta =$

219. Suppose θ is an angle in standard position with terminal side in the third quadrant. If $\sin \theta = -\frac{2}{5}$, then $\sec \theta =$

220. The vertex of the parabola $y = x^2$ is at:

221. The vertex of the parabola $y = x^2 - 3x$ is at:

222. The vertex of the parabola $y = x^2 - 8$ is at:

223. The vertex of the parabola $y = 3x^2 - 6x + 2$ is at:

224. The vertex of the parabola $2x^2 - x - y + 7 = 0$ is at:

225. The vertex of the parabola $2x^2 - 8x - y - 3 = 0$ is at:

226. The vertex of the parabola $y = 3(x - 6)^2 + 5$ is at:



COASTLINE COMMUNITY COLLEGE
NEW MATH PLACEMENT TEST REVIEW
(ANSWERS)

- | | | | |
|-----|--------|-----|--------------------|
| 1. | 1.734 | 39. | \$72,000 |
| 2. | 171.76 | 40. | \$20,000 |
| 3. | 0.4 | 41. | 15 |
| 4. | 0.3042 | 42. | - 16 |
| 5. | 11.96 | 43. | - 25 |
| 6. | 8.5 | 44. | - 61 |
| 7. | 24.66 | 45. | - 11 |
| 8. | 25.76 | 46. | - 9 |
| 9. | 1.34 | 47. | 18 |
| 10. | 6.71 | 48. | - 144 |
| 11. | 4.88 | 49. | - 80 |
| 12. | 6.6 | 50. | - 8 |
| 13. | 0.88 | 51. | - 3x + 8y |
| 14. | 2.5 | 52. | 2x - 6y |
| 15. | 8.7 | 53. | 11x - 21y |
| 16. | 1.03 | 54. | 5x - 18y |
| 17. | 1/2 | 55. | 5x - 18y |
| 18. | 29/35 | 56. | 1/27 |
| 19. | 19/15 | 57. | 1/16 |
| 20. | 3/5 | 58. | 1/9 |
| 21. | 16/35 | 59. | 1/125 |
| 22. | 7/15 | 60. | 1/64 |
| 23. | 7/15 | 61. | 0 |
| 24. | 13/24 | 62. | 3 |
| 25. | 1/2 | 63. | - 5/3 |
| 26. | 25/7 | 64. | 13 |
| 27. | 32 | 65. | 1 |
| 28. | 1/21 | 66. | - 5/7 |
| 29. | 15 | 67. | - 3 |
| 30. | 4 | 68. | undefined |
| 31. | 5 | 69. | 6 |
| 32. | 12 | 70. | 0 |
| 33. | 49 | 71. | $9x^2 - 16$ |
| 34. | 15 | 72. | $4a^2 - 12a + 9$ |
| 35. | 0 | 73. | $6x^2 - 7x - 5$ |
| 36. | \$750 | 74. | $x^2 + 4xy + 4y^2$ |
| 37. | \$1008 | 75. | $2a^2 - ab - 6b^2$ |
| 38. | \$480 | 76. | $64a^3$ |

77. $81a^4b^{12}$
 78. $-125a^9$
 79. $4a^4b^4$
 80. $8a^{12}b^3$
 81. $3x + 1$ or x
 82. $x + 4$ or $x + 5$
 83. $x + 3$ or $x - 3$
 84. $x - 6$ or $x + 1$
 85. $x + 4$ or $x - 1$
 86. $5\sqrt{3}$
 87. $5\sqrt{2}$
 88. $11\sqrt{2}$
 89. 10
 90. $10\sqrt{2}$
 91. $x > 1$
 92. $x < 6$
 93. $x \leq 1$
 94. $x \leq -2$
 95. $x > -6$
 96. $x < 5$
 97. $x > 2$
 98. $x > -1/6$
 99. $x < 6$
 100. $x > 10/7$
 101. x^5
 102. $1/(2x^7)$
 103. 3
 104. $3x^6/2$
 105. 1
 106. $2\sqrt{m}$
 107. $4\sqrt{2a}$
 108. $3\sqrt{y} + \sqrt{3y}$
 109. $3\sqrt{2x}$
 110. $5\sqrt{3y}$
 111. $2|y|\sqrt{x}$
 112. $2|x||y^3|\sqrt{5x}$
 113. $3|b|c^2\sqrt{2ac}$
 114. $10|x^3|\sqrt{2x}$
 115. D/R
 116. $(P - 2B)/2$
 117. $(k - 2n)/3$
 118. $I/(RT)$
 119. $(2x - z)/3$
 120. -3
 121. 4
 122. -12
 123. $7/2$
 124. $10/3$
 125. $4/x$
 126. $x(x+1)/(2x+1)$
 127. $4/x$
 128. $3/x$
 129. $x/2$
 130. $2(x+2)(x-2)$
 131. $3(x+3)(x-3)$
 132. $2(4+x)(4-x)$
 133. $2(5+x)(5-x)$
 134. $k(x+3)(x-3)$
 135. $5/x$
 136. $(2x+3y)/(xy)$
 137. $(2b^2-3a^2)/(ab)$
 138. $2x/y$
 139. $8n^3/m^2$
 140. $2x/(x+1)$
 141. $(1+\sqrt{5})/2$ or $(1-\sqrt{5})/2$
 142. $1+\sqrt{2}$ or $1-\sqrt{2}$
 143. $(-1+\sqrt{17})/2$ or $(-1-\sqrt{17})/2$
 144. 2 or $-1/2$
 145. $(-1+\sqrt{13})/6$ or $(-1-\sqrt{13})/6$
 146. b
 147. a
 148. d
 149. f
 150. d
 151. e
 152. g
 153. h
 154. d
 155. $(2y - x)/(2y + x)$
 156. $(y + 1)(y - 1)$
 157. $(3x + 2y)/(x - 2y)$
 158. $(x + 2y)/(x - 2y)$
 159. $(3y - x)/(3y + 3x)$
 160. $(8 - 3a)/(2 - 4a)$
 161. $(1 - 3y)/(2y - 4)$
 162. $(4b - 11)/(2 + b)$
 163. $(3x - 8)/(2x + 4)$
 164. $(5b + 6)/(3b - 2)$
 165. 3
 166. 5
 167. 2
 168. 1

169. -1
 170. $x < 1$ or $x > 5$
 171. $-1 < x < -1/3$
 172. $x < -2$ or $x > 8$
 173. $x < -5$ or $x > 1$
 174. $1 \leq x \leq 4$
 175. -1
 176. 30
 177. 23
 178. -11
 179. 3
 180. $(1, 1)$
 181. $(5/3, -2/3)$
 182. $(2, 1/2)$
 183. $(3/5, 1/5)$
 184. $(1, -2)$
 185. $y = x^2 - 1$
 186. $y = -x^2 + 2x + 3$
 187. $y = -2x + 4$
 188. $y = 2x - 2$
 189. $y = x^2 + x - 2$
 190. $w^2 - 200 = 0$
 191. $w^2 + w - 240 = 0$
 192. $2h^2 - 3h - 350 = 0$
 193. $w^2 + 5w - 266 = 0$
 194. $2w + 2(w+4) = 112$
 195. 3
 196. -2
 197. 0
 198. $\frac{\log 7}{\log 5}$
199. $\frac{\log 4}{\log 3}$
 200. $3x^2 + 8$
 201. $3/(x^2 - 2)$
 202. $3x^2 - 10$
 203. $1/(5x - 6)$
 204. $3 - 4x^2$
 205. I
 206. III
 207. II
 208. II
 209. III
 210. $5\sqrt{34}/34$
 211. $3\sqrt{34}/34$
 212. $3/5$
 213. $5/3$
 214. $\sqrt{34}/3$
 215. $3/5$
 216. $-\sqrt{5}/3$
 217. $-4/3$
 218. $3/4$
 219. $-5\sqrt{21}/21$
 220. $(0, 0)$
 221. $(3/2, -9/4)$
 222. $(0, -8)$
 223. $(1, -1)$
 224. $(1/4, 55/8)$
 225. $(2, -11)$
 226. $(6, 5)$

P.S. If you discover any errors please call Mr. Feldon at (714) 241-6209 Ext. 17322. Thanks!