This exam is intended as an overall review and includes problems similar to what you may expect on the Accuplacer exam. However, it is NOT a sample exam.

Accuplacer Exam Info

• Consult the following web site for the most up-to-date information on placement testing at GCC.
  http://www.gccaz.edu/testingservices/
  Google “GCC Testing Services.”

• The most recent version of this exam should be available at
  http://www.gccaz.edu/math/Placement.htm

• Please send any comments to
  walter.kehowski@gccaz.edu
  Please include the following information in your email:
1. Solve $2x^2 - 7x + 6 = 0$.

   (a) $\left\{ \frac{2}{3}, -2 \right\}$
   (b) $\left\{ \frac{3}{2}, 2 \right\}$
   (c) $\left\{ -\frac{3}{2}, 2 \right\}$
   (d) $\left\{ -\frac{2}{3}, -2 \right\}$

2. Solve the system of linear equations.

\[
\begin{align*}
3x + y &= 13 \\
2x + 9y &= -8
\end{align*}
\]

   (a) $(-5, 2)$
   (b) $(5, 2)$
   (c) $(5, -2)$
   (d) $(-5, -2)$

3. Solve the linear equation.

\[-8x + 3(-2x - 2) = -12 - 8x\]

   (a) $1$
   (b) $3$
   (c) $-1$
   (d) $\frac{9}{11}$

4. Solve the radical equation.

\[3\sqrt{5 - 2x} = 9\]

   (a) $-2$
   (b) $2, 38$
   (c) $3, 8$
   (d) $2$

5. Solve the inequality.

\[10 - 4a - 7 \geq -5a - 6\]

   (a) $(\infty, -4)$
   (b) $(-4, \infty)$
   (c) $[-9, \infty)$
   (d) $(-\infty, -9]$\]

6. During one year the Larson’s real estate bill included $443 for local schools. Of this amount, $175 went to the high school district. What percent did the Larsons pay to the high school district?

   (a) 60.50%  
   (b) 39.50%  
   (c) 39.28%  
   (d) 17.50%

7. On Monday an investor bought 100 shares of stock. On Tuesday the value of the shares went up 4%. How much did the investor pay for the shares if he sold them Wednesday morning for $1248?

   (a) $1189.08$  
   (b) $1020$  
   (c) $1198.08$  
   (d) $1200$

8. Solve the absolute value inequality.

\[|h + 3| + 9 \leq 12\]

   (a) $\emptyset$  
   (b) $[-6, 0]$  
   (c) $[-6, 12]$  
   (d) $(-6, 0)$

9. Find $f(-1)$ if $f(x) = x^2 + 2x + 7$

   (a) $-4$  
   (b) $-8$  
   (c) $10$  
   (d) $6$

10. Find the product. $(x - 2)(5x - 2)$

   (a) $x^2 - 12 - 12$  
   (b) $5x^2 + 4x - 12$  
   (c) $5x^2 - 12x + 4$  
   (d) $5x^2 - 13x + 4$
11. Find the product. \((5x + 3)(x^2 - 3x - 4)\)

(a) \(5x^3 - 12x^2 - 29x - 12\)  
(b) \(5x^3 + 12x^2 - 29x - 12\)  
(c) \(5x^3 - 12x^2 + 29x - 12\)  
(d) \(5x^3 - 12x^2 - 29x + 12\)

12. Simplify. \(\frac{4 + \frac{1}{2}}{3 + \frac{1}{6}}\)

(a) 9  
(b) \(\frac{5}{9}\)  
(c) 12  
(d) \(\frac{1}{12}\)

13. Simplify. \(\frac{\frac{5}{x - 5} + \frac{3}{x + 3}}{\frac{x}{x + 3} + \frac{3}{x - 5}}\)

(a) 1  
(b) \(\frac{x - 2}{x}\)  
(c) \(\frac{x}{x + 2}\)  
(d) \(\frac{x}{x - 2}\)

14. Find the slope of the line through the points \((7, -9)\) and \((-4, -1)\)

(a) \(-\frac{16}{3}\)  
(b) \(-\frac{11}{8}\)  
(c) \(-\frac{3}{16}\)  
(d) \(-\frac{8}{11}\)

15. Solve the absolute value equation. \(|5m + 2| + 5 = 8\)

(a) \(\emptyset\)  
(b) \(\{-1, \frac{1}{5}\}\)  
(c) \(\left\{-\frac{5}{2}, \frac{1}{2}\right\}\)  
(d) \(\left\{-\frac{1}{5}, 1\right\}\)

16. Multiply and simplify. Write your answer in radical notation. \(\sqrt[3]{xy}^5 \sqrt[3]{x^2}y^{17}\)

(a) \(x^2y^7\sqrt[3]{xy}\)  
(b) \(x^2y^7\sqrt[3]{x^2}y\)  
(c) \(x^2y^7\sqrt[3]{x^2}y\)  
(d) \(x^7y^2\sqrt[3]{x^2y}\)

17. Simplify. \(\frac{\sqrt[3]{320x^{13}y^{18}}}{\sqrt[3]{10x^3y^3}}\)

(a) \(2x^2y^3\sqrt[3]{y}\)  
(b) \(2x^2y^3\sqrt[3]{y}\)  
(c) \(2x^2y^3\sqrt[3]{y}\)  
(d) \(16x^5y^8\sqrt[3]{10}\)

18. Multiply out. \((9 - 6i)^2\)

(a) 81 - 72i  
(b) 117 - 108i  
(c) 81 - 144i  
(d) 45 - 108i

19. Factor completely. \(x^2 + 7xy - 144y^2\)

(a) \((x - 16y)(x + y)\)  
(b) \((x - 16y)(x + 9y)\)  
(c) \((x - y)(x + 9y)\)  
(d) \((x + 16y)(x - 9y)\)
20. Factor by grouping.  $10x^2 + 6xy - 25xy - 15y^2$

(a) $(2x - 5)(5x + 3)$  
(b) $(10x - 5y)(x + 3y)$  
(c) $(2x + 5y)(5x + 3y)$  
(d) $(2x - 5y)(5x + 3y)$

Intermediate Algebra Review
for
Accuplacer Placement Exam

ANSWER KEY

1. b
2. c
3. a
4. a
5. c
6. b
7. d
8. b
9. d
10. c
11. a
12. a
13. d
14. d
15. b
16. c
17. b
18. d
19. d
20. d