Glendale Community College, AZ

Intermediate Algebra Review for ASSET Placement Exam

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

ASSET Exam Info

1. You have 25 minutes to complete the multiple choice exam.
2. The Numerical Skills exam has 32 questions. All other exams have 25 questions.
3. No calculator allowed on the Numerical Skills exam. On all other exams you may use a scientific calculator. No programmable or graphing calculators are allowed. Most problems on the exam do not require a calculator and can be solved quickly with paper and pencil.
4. Be sure you start of with the right exam! If you don't know what exam to take, start off with the Elementary Algebra Exam.
5. The most important factor in successfully completing the exam is *time*. Don't spend too much time on one question. If you get stuck, move on, and then come back to it.

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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)** $\left\{-\frac{2}{3}, -2\right\}$

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2. Solve the system of linear equations. $\begin{array}{rcrcr} 3x & + & y & = & 13 \\ 2x & + & 9y & = & -8 \end{array}$

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

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3. Solve the linear equation. $-8x + 3(-2x - 2) = -12 - 8x$

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

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4. Solve the radical equation. $3\sqrt{5 - 2x} = 9$

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

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5. Solve the inequality. $10 - 4a - 7 \geq -5a - 6$

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

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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%

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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

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8. Solve the absolute value inequality. $|h + 3| + 9 \leq 12$

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

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

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

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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)** $5x^3-12x^2-29x+12$

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12. Simplify. $\dfrac{4+\frac{1}{2}}{\frac{1}{3}+\frac{1}{6}}$

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

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13. Simplify. $\dfrac{\frac{5}{x-5}+\frac{3}{x+3}}{\frac{5}{x+3}+\frac{3}{x-5}}$

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

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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)** $-\frac{8}{11}$

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15. Solve the absolute value equation. $|5m+2|+5=8$

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

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16. Multiply and simplify. Write your answer in radical notation. $\sqrt[3]{xy^5}\sqrt[3]{x^7y^{17}}$

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

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17. Simplify. $\dfrac{\sqrt[5]{320x^{13}y^{18}}}{\sqrt[5]{10x^3y^3}}$

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

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

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

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19. Factor completely. $x^2+7xy-144y^2$

(a) $(x-16y)(x+y)$ **(b)** $(x-16y)(x+9y)$

(c) $(x-y)(x+9y)$ **(d)** $(x+16y)(x-9y)$

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

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ANSWER KEY

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