

Student: _____
Date: _____
Time: _____

Instructor: Garth Isaak
Course: precalc blitzer (1)
Book: Blitzer: Precalculus Essentials, 3e

Assignment: Algebra practice diagnostic 2b

1. Simplify the algebraic expression.

$$-8(3r + 4) + 6(8r + 5)$$

- A. $-5r - 4$
 B. $-56r$
 C. $24r + 4$
 D. $24r - 2$
-

2. Rationalize the denominator.

$$\frac{3}{7 - \sqrt{5}}$$

- A. $\frac{21 - 3\sqrt{5}}{44}$
 B. $\frac{21 + 3\sqrt{5}}{44}$
 C. $\frac{21 + 3\sqrt{5}}{2}$
 D. $\frac{3}{7} - \frac{3}{\sqrt{5}}$
-

3. Find the product.

$$(7xy + 11)(6xy - 11)$$

- A. $42x^2y^2 - 11xy - 121$
 B. $42x^2y^2 - 11xy - 11$
 C. $13x^2y^2 - 11xy - 121$
 D. $13x^2y^2 - 11xy - 11$
-

Student: _____
Date: _____
Time: _____

Instructor: Garth Isaak
Course: precalc blitzer (1)
Book: Blitzer: Precalculus Essentials, 3e

Assignment: Algebra practice diagnostic 2b

4. Factor the trinomial, or state that the trinomial is prime.

$$x^2 - x - 6$$

- A. $(x + 2)(x - 3)$
 B. $(x + 3)(x - 2)$
 C. $(x + 1)(x - 5)$
 D. prime
-

5. Simplify the complex rational expression.

$$\frac{1 - \frac{2}{x}}{1 + \frac{2}{x}}$$

- A. $\frac{x + 2}{x - 2}$
 B. $x + 2$
 C. $x - 2$
 D. $\frac{x - 2}{x + 2}$
-

6. Solve the rational equation.

$$\frac{1}{x - 1} + \frac{1}{4x - 4} = (5 / 4)$$

- A. $\{1\}$
 B. $\{10\}$
 C. $\{0\}$
 D. $\{2\}$
-

Student: _____
Date: _____
Time: _____

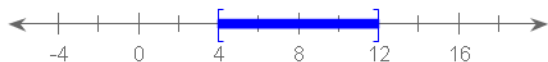
Instructor: Garth Isaak
Course: precalc blitzer (1)
Book: Blitzer: Precalculus Essentials, 3e

Assignment: Algebra practice diagnostic 2b

7. Solve the absolute value inequality. Other than \emptyset , use interval notation to express the solution set and graph the solution set on a number line.

$$|x - 7| + 9 \leq 12$$

A. $[4, 12]$



B. $[4, 10]$



C. $(4, 10)$



D. $(-\infty, 4] \cup [10, \infty)$



Student: _____
Date: _____
Time: _____

Instructor: Garth Isaak
Course: precalc blitzer (1)
Book: Blitzer: Precalculus Essentials, 3e

Assignment: Algebra practice diagnostic 2b

1. D

2. B

3. A

4. A

5. D

6. D

7. B
