

Student: _____
Date: _____
Time: _____

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

Assignment: Algebra practice diagnostic 2a

1. Write the algebraic expression without parentheses.

$$\frac{1}{6}(6x) + [(5x) + (-5x)]$$

- A. 1
 B. $-9x$
 C. x
 D. $11x$

2. Rationalize the denominator.

$$\frac{2}{9 - \sqrt{5}}$$

- A. $\frac{9 + \sqrt{5}}{2}$
 B. $\frac{9 - \sqrt{5}}{38}$
 C. $\frac{9 + \sqrt{5}}{38}$
 D. $\frac{2}{9} - \frac{2}{\sqrt{5}}$

3. Find the product.

$$(8x + 7y)^2$$

- A. $64x^2 + 112xy + 49y^2$
 B. $8x^2 + 49y^2$
 C. $64x^2 + 49y^2$
 D. $8x^2 + 112xy + 49y^2$

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

$$10x^2 + 4x - 6$$

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

5. Simplify the complex rational expression.

$$\frac{\frac{x}{x+6} + 1}{\frac{27}{x^2-36} + 1}$$

- A. $\frac{2x-12}{x-3}$
 B. $\frac{2x-12}{x+3}$
 C. $\frac{x-6}{x-3}$
 D. $\frac{2x+12}{x+3}$
-

6. First, write the value or values of the variable that make a denominator zero. Then solve the equation.

$$\frac{x-8}{2x} + 7 = \frac{x+4}{x}$$

- A. none; $\{(12/14)\}$
 B. 0; $\{(16/13)\}$
 C. 0, 2; $\{(16/13)\}$
 D. 0; $\{(9/-1)\}$
-

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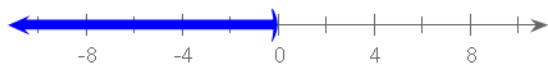
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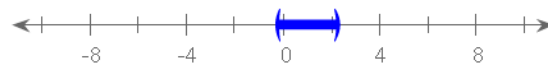
7. Solve the absolute value inequality. Other than \emptyset , use interval notation to express the solution set and graph the solution set on a number line.

$$|5x - 5| - 3 < -9$$

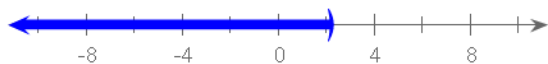
A. $(-\infty, (-1/5))$



B. $((-1/5), (11/5))$



C. $(-\infty, (11/5))$



D. \emptyset

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1. C

2. C

3. A

4. A

5. A

6. B

7. D
