Student: _____ **Date:** _____	**Instructor:** George Jensen **Course:** Pre-College Mathematics V 39119 W - Spring 2020 2nd 7 wk	**Assignment:** Test #1 Review

1. Solve the following absolute value equation.

$|x - 5| = 11$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- **A.** The solution set is $\{$ _____ $\}$.
  (Simplify your answer. Use a comma to separate answers as needed.)
- **B.** The solution set is $\{\ \}$ or $\varnothing$.

ID: 13.6.47

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2. Solve the following absolute value equation.

$|3 - 7x| = |2x - 1|$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- **A.** The solution set is $\{$ _____ $\}$.
  (Simplify your answer. Use a comma to separate answers as needed.)
- **B.** The solution set is $\{\ \}$ or $\varnothing$.

ID: 13.6.63

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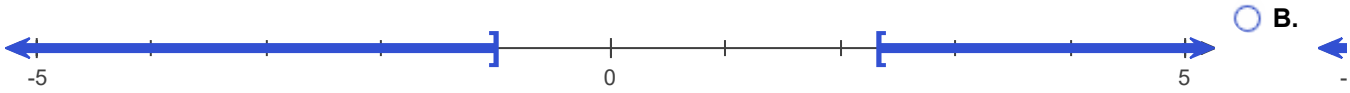
3. Solve the following absolute value inequality. Graph the solution set on a real number line.

$|2 - 3x| + 1 < 6$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- **A.** The solution set is _____.
  (Simplify your answer. Type your answer in interval notation. Use integers or fractions for any numbers in the express
- **B.** The solution set is $\{\ \}$ or $\varnothing$.

Choose the correct graph below.

- **A.**


- **B.**

- **C.**


- **D.**

- **E.**


- **F.**

ID: 13.6.79

4. Solve the following absolute value inequality. Graph the solution set on a real number line.

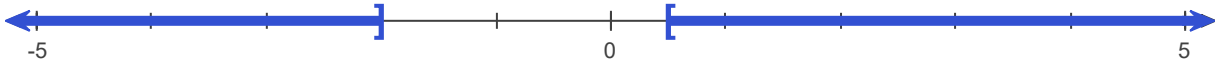
$|-4x-3| \geq 5$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- **A.** The solution set is _____.
  (Simplify your answer. Type your answer in interval notation. Use integers or fractions for any numbers in the expres
- **B.** The solution set is { } or ∅.

Choose the correct graph below.

- **A.**



- **B.**

- **C.**

- **D.**

- **E.**

- **F.**

ID: 13.6.85

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5. Simplify the square root.

$\sqrt{(x+14)^2}$

$\sqrt{(x+14)^2}$ = _____ (Simplify your answer.)

ID: 14.1.51

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6. Evaluate the following expression, or state that the expression is not a real number.

$\sqrt{9} + \sqrt{81}$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- **A.** $\sqrt{9} + \sqrt{81}$ = _____ (Type an integer or a simplified fraction.)
- **B.** The expression is not a real number.

ID: 14.1.59

7. Simplify the radical.

$\sqrt[3]{-125}$

Select the correct choice below and fill in any answer boxes in your choice.

- **A.** $\sqrt[3]{-125}$ = _____
- **B.** The root is not a real number.

ID: 14.2.39

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8. Simplify the given expression.

$\sqrt[9]{y^9}$

$\sqrt[9]{y^9}$ = _____

ID: 14.2.53

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9. Evaluate the expression.

$(-8)^{2/3}$

Select the correct choice below and fill in any answer boxes in your choice.

- **A.** $(-8)^{2/3}$ = _____ (Simplify your answer.)
- **B.** The answer is not a real number.

ID: 14.2.83

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10. Rewrite the following radical with a rational exponent.

$\left(\sqrt[8]{8x}\right)^7$

$\left(\sqrt[8]{8x}\right)^7$ = _____
(Simplify your answer. Use integers or fractions for any numbers in the expression.)

ID: 14.2.95

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11. Simplify the expression.

$9^{\frac{3}{4}} \cdot 9^{\frac{5}{4}}$

$9^{\frac{3}{4}} \cdot 9^{\frac{5}{4}}$ = _____

ID: 14.3.17

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12. Simplify the expression. Assume all variables are positive.

$$\left(36a^2b^{-\frac{7}{5}}\right)^{\frac{1}{2}}$$

$\left(36a^2b^{-\frac{7}{5}}\right)^{\frac{1}{2}}$ = _____

(Simplify your answer. Use positive exponents only.)

ID: 14.3.33

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13. Use rational exponents to simplify the radical. Assume the variable is positive.

$$\sqrt{\sqrt[8]{x^7}}$$

The expression is equal to _____. (Type an exact answer, using radicals as needed.)

ID: 14.3.49

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14. Simplify the radical using the product property. Assume that all variables can be any real number.

$$\sqrt{28y^4}$$

$\sqrt{28y^4}$ = _____

(Simplify your answer. Type an exact answer, using radicals as needed.)

ID: 14.4.49

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15. Simplify. Assume that all variables are greater than or equal to zero.

$$\sqrt[4]{\frac{37x^4}{81}}$$

$\sqrt[4]{\frac{37x^4}{81}}$ = _____

(Type an exact answer, using radicals as needed. Simplify your answer.)

ID: 14.4.91

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16. Multiply and simplify.

$$\sqrt{7} \cdot \sqrt[3]{9}$$

$\sqrt{7} \cdot \sqrt[3]{9}$ = _____

(Simplify your answer. Type an exact answer, using radicals as needed.)

ID: 14.4.111

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17. Add as indicated.

$\sqrt{12} + 9\sqrt{3}$

$\sqrt{12} + 9\sqrt{3} =$ _____ (Type an exact answer, using radicals as needed.)

ID: 14.5.27

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18. Add or subtract, as indicated. Assume all variables are greater than or equal to zero.

$\sqrt{48x^2} + 3x\sqrt{5} - 2\sqrt{180x^2}$

$\sqrt{48x^2} + 3x\sqrt{5} - 2\sqrt{180x^2} =$ _____
(Simplify your answer. Do not factor. Type an exact answer, using radicals as needed.)

ID: 14.5.39

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19. Multiply and simplify.

$\left(2 - 8\sqrt{7}\right)\left(2 + 3\sqrt{7}\right)$

$\left(2 - 8\sqrt{7}\right)\left(2 + 3\sqrt{7}\right) =$ _____
(Type an exact answer, using radicals as needed.)

ID: 14.5.61

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20. Multiply.

$(2 + \sqrt{10})^2$

$(2 + \sqrt{10})^2 =$ _____
(Simplify your answer. Type an exact answer, using radicals as needed.)

ID: 14.5.67

1. A. The solution set is $\{16, -6\}$.(Simplify your answer. Use a comma to separate answers as needed.)

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2. A. The solution set is $\left\{\frac{4}{9}, \frac{2}{5}\right\}$.(Simplify your answer. Use a comma to separate answers as needed.)

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3. A. The solution set is $\left(-1, \frac{7}{3}\right)$.

(Simplify your answer. Type your answer in interval notation. Use integers or fractions for any numbers in the expression.)

C. 

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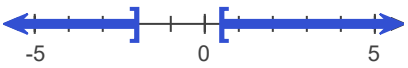
4. A. The solution set is $(-\infty, -2] \cup \left[\frac{1}{2}, \infty\right)$.

(Simplify your answer. Type your answer in interval notation. Use integers or fractions for any numbers in the expression.)

A. 

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5. $|x + 14|$

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6. A. $\sqrt{9} + \sqrt{81} =$ 12 (Type an integer or a simplified fraction.)

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7. A. $\sqrt[3]{-125} =$ -5

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8. y

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9. A. $(-8)^{2/3} =$ 4 (Simplify your answer.)

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10. $(8x)^{\frac{7}{8}}$

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11. 81

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12. $\frac{6a}{b^{\frac{7}{10}}}$

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13. $\sqrt[16]{x^7}$

14. $2y^2\sqrt{7}$

15. $\frac{x\sqrt[4]{37}}{3}$

16. $\sqrt[6]{27783}$

17. $11\sqrt{3}$

18. $4x\sqrt{3} - 9x\sqrt{5}$

19. $-164 - 10\sqrt{7}$

20. $14 + 4\sqrt{10}$