Quiz: Rationalizing Denominators

Question 1a of 15 (2 Rationalizing Denominators 92031)

Maximum Attempts: 1
Question Type: Multiple Choice
Maximum Score: 2
Question: Which choice is the conjugate of the expression below when $x \geq 6$?

$\sqrt{x-6}-3$

	Choice	Feedback
A.	$\sqrt{x-6}-3$	
B.	$\sqrt{x+6}+3$	
*C.	$\sqrt{x-6}+3$	Correct!
D.	$\sqrt{x+6}-3$	

Global Incorrect Feedback
The correct answer is: $\sqrt{x-6}+3$.

Question 1b of 15 (2 Rationalizing Denominators 295557)

Maximum Attempts: 1
Question Type: Multiple Choice
Maximum Score: 2
Question: Which choice is the conjugate of the expression below when $x \geq 5$?

$\sqrt{x-5}-2$

	Choice	Feedback
A.	$\sqrt{x+5}-2$	
B.	$\sqrt{x-5}-2$	
C.	$\sqrt{x+5}-2$	
*D.		Correct!

Global Incorrect Feedback
The correct answer is: .

Question 1c of 15 (2 Rationalizing Denominators 295558)

Maximum Attempts: 1
Question Type: Multiple Choice
Maximum Score: 2
Question: Which choice is the conjugate of the expression below when x 4?

	Choice	Feedback
***A.**	$\sqrt{x-4}+5$	Correct!
B.	$\sqrt{x+4}-5$	
C.	$\sqrt{x+4}+5$	
D.	$\sqrt{x}-4-5$	

Global Incorrect Feedback
The correct answer is: $\sqrt{x-4}-5$.

Question 2a of 15 (2 Rationalizing Denominators 92032)

Maximum Attempts: 1
Question Type: Multiple Choice
Maximum Score: 2
Question: Which choice is the conjugate of the expression below when $x \geq -4$?

$5-\sqrt{x+4}$

	Choice	Feedback
***A.**	$5+\sqrt{x+4}$	Correct!
B.	$5-\sqrt{x+4}$	
C.	$5+\sqrt{x-4}$	
D.	$5-\sqrt{x-4}$	

Global Incorrect Feedback
The correct answer is: $5+\sqrt{x+4}$.

Question 2b of 15 (2 Rationalizing Denominators 295559)

Maximum Attempts: 1
Question Type: Multiple Choice
Maximum Score: 2
Question: Which choice is the conjugate of the expression below when x -4?

	Choice	Feedback
A.		
B.		
***C.**		Correct!
D.		

Global Incorrect Feedback
The correct answer is: .

Question 2c of 15 (2 Rationalizing Denominators 295560)

Maximum Attempts: 1
Question Type: Multiple Choice
Maximum Score: 2
Question: Which choice is the conjugate of the expression below when $x \geq -4$?

$5 - \sqrt{x+4}$

	Choice	Feedback
*A.	$5 + \sqrt{x+4}$	Correct!
B.	$5 - \sqrt{x+4}$	
C.	$5 + \sqrt{x-4}$	
D.	$5 - \sqrt{x-4}$	

Global Incorrect Feedback
The correct answer is: $5 + \sqrt{x+4}$.

Question 3a of 15 (3 Rationalizing Denominators 92033)

Maximum Attempts: 1
Question Type: Numeric Fill In Blank
Maximum Score: 2
Correct Answer: 19
Question: Rationalize the denominator of the fraction and enter the new denominator below.

$$\frac{5}{5+\sqrt{6}}$$

Attempt	Incorrect Feedback
1st	

	Correct Feedback
	Correct!

	Global Incorrect Feedback
	The correct answer is: 19.

Question 3b of 15 (3 Rationalizing Denominators 295561)

Maximum Attempts: 1
Question Type: Numeric Fill In Blank
Maximum Score: 2
Correct Answer: 11
Question: Rationalize the denominator of the fraction and enter the new denominator below.

Attempt	Incorrect Feedback
1st	

	Correct Feedback
	Correct!

	Global Incorrect Feedback
	The correct answer is: 11.

Question 3c of 15 (3 Rationalizing Denominators 295562)

Maximum Attempts: 1
Question Type: Numeric Fill In Blank
Maximum Score: 2
Correct Answer: 31
Question: Rationalize the denominator of the fraction and enter the new denominator below.

$$\frac{5}{6+\sqrt{5}}$$

Attempt	Incorrect Feedback
1st	

	Correct Feedback
	Correct!

	Global Incorrect Feedback
	The correct answer is: 31.

Question 4a of 15 (3 Rationalizing Denominators 92034)

Maximum Attempts: 1
Question Type: Numeric Fill In Blank
Maximum Score: 2
Correct Answer: -2
Question: Rationalize the denominator of the fraction and enter the new denominator below.

$$\frac{7}{3-\sqrt{11}}$$

Attempt	Incorrect Feedback
1st	

	Correct Feedback
	Correct!

	Global Incorrect Feedback
	The correct answer is: -2.

Question 4b of 15 (3 Rationalizing Denominators 295563)

Maximum Attempts: 1
Question Type: Numeric Fill In Blank
Maximum Score: 2
Correct Answer: -8
Question: Rationalize the denominator of the fraction and enter the new denominator below.

Attempt	Incorrect Feedback
1st	

	Correct Feedback
	Correct!

	Global Incorrect Feedback
	The correct answer is: -8.

Question 4c of 15 (3 Rationalizing Denominators 295564)

Maximum Attempts: 1
Question Type: Numeric Fill In Blank
Maximum Score: 2
Correct Answer: -4
Question: Rationalize the denominator of the fraction and enter the new denominator below.

$$\frac{?}{3\sqrt{3}}$$

Attempt	Incorrect Feedback
1st	

	Correct Feedback
	Correct!

	Global Incorrect Feedback
	The correct answer is: -4.

Question 5a of 15 (3 Rationalizing Denominators 92035)

Maximum Attempts: 1
Question Type: Multiple Choice
Maximum Score: 2
Question: Which choice is equivalent to the fraction below when *x* is an appropriate value? *Hint: Rationalize the denominator and simplify.*

$$\frac{3}{3-\sqrt{6x}}$$

	Choice	Feedback
A.	$\frac{3+\sqrt{6x}}{9-2x}$	
***B.**		Correct!
C.		
D.		

Global Incorrect Feedback
The correct answer is: .

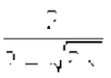
Question 5b of 15 (3 Rationalizing Denominators 295566)

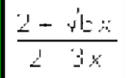
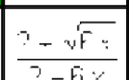
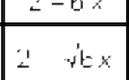
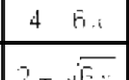
Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 2

Question: Which choice is equivalent to the fraction below when *x* is an appropriate value? *Hint: Rationalize the denominator and simplify.*



	Choice	Feedback
***A.**		Correct!
B.		
C.		
D.		

Global Incorrect Feedback
The correct answer is: .

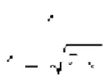
Question 5c of 15 (3 Rationalizing Denominators 295567)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 2

Question: Which choice is equivalent to the fraction below when *x* is an appropriate value? *Hint: Rationalize the denominator and simplify.*



	Choice	Feedback
A.		
B.		
C.		
***D.**		Correct!

Global Incorrect Feedback
The correct answer is: .

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Question 6a of 15 (3 Rationalizing Denominators 92036)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 2

Question: Which choice is equivalent to the fraction below when *x* is an appropriate value? *Hint: r]Rationalize the denominator and simplify.*

$$\frac{5}{5+\sqrt{10x}}$$

	Choice	Feedback
***A.**	$\frac{5-\sqrt{10x}}{5-2x}$	Correct!
B.	$\frac{5-\sqrt{10x}}{5-10x}$	
C.	$\frac{5-\sqrt{10x}}{25-2x}$	
D.	$\frac{5-\sqrt{10x}}{25-10x}$	

Global Incorrect Feedback
The correct answer is: $\frac{5-\sqrt{10x}}{5-2x}$.

Question 6b of 15 (3 Rationalizing Denominators 295568)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 2

Question: Which choice is equivalent to the fraction below when *x* is an appropriate value? *Hint: Rationalize the denominator and simplify.*

$$\frac{5}{5+\sqrt{2x}}$$

	Choice	Feedback
A.		
B.		
C.		
***D.**		Correct!

Global Incorrect Feedback
The correct answer is: .

Question 6c of 15 (3 Rationalizing Denominators 295569)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 2

Question: Which choice is equivalent to the fraction below when x is an appropriate value? *Hint: Rationalize the denominator and simplify.*

$$\frac{7}{7-\sqrt{7x}}$$

	Choice	Feedback
*A.	$\frac{7-\sqrt{14x}}{7-2x}$	Correct!
B.	$\frac{7-\sqrt{7x}}{49-2x}$	
C.	$\frac{7-\sqrt{14x}}{7-14x}$	
D.	$\frac{7-\sqrt{7x}}{49-14x}$	

Global Incorrect Feedback
The correct answer is: $\frac{7-\sqrt{14x}}{7-2x}$.

Question 7a of 15 (3 Rationalizing Denominators 92037)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 2

Question: Which choice is equivalent to the fraction below when $x \geq 1$? *Hint: Rationalize the denominator and simplify.*

$$\frac{1}{\sqrt{x}-\sqrt{x-1}}$$

	Choice	Feedback
A.		
*B.		Correct!
C.		
D.		

Global Incorrect Feedback
The correct answer is: .

Question 7b of 15 (3 Rationalizing Denominators 295570)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 2

Question: Which choice is equivalent to the fraction below when x 1? *Hint: Rationalize the denominator and simplify.*

	Choice	Feedback
A.	$-\sqrt{x-1}-\sqrt{x}$	
***B.**	$\sqrt{x}+\sqrt{x-1}$	Correct!
C.	$\sqrt{x}-\sqrt{x-1}$	
D.	$\frac{\sqrt{x}+\sqrt{x-1}}{2x-1}$	

Global Incorrect Feedback
The correct answer is: $\sqrt{x}+\sqrt{x-1}$.

Question 7c of 15 (3 Rationalizing Denominators 295572)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 2

Question: Which choice is equivalent to the fraction below when $x \geq 1$? *Hint: Rationalize the denominator and simplify.*

$$\frac{1}{\sqrt{x}-\sqrt{x-1}}$$

	Choice	Feedback
A.	$-\sqrt{x}-\sqrt{x-1}$	
***B.**	$\sqrt{x}+\sqrt{x-1}$	
C.	$\sqrt{x-1}-\sqrt{x}$	
D.	$\frac{\sqrt{x}+\sqrt{x-1}}{2x-1}$	

Global Incorrect Feedback
The correct answer is: $\sqrt{x}+\sqrt{x-1}$.

Question 8a of 15 (3 Rationalizing Denominators 92038)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 2

Question: Which choice is equivalent to the fraction below when x 2? *Hint: Rationalize the denominator and simplify.*

	Choice	Feedback
A.		
***B.**		Correct!
C.		
D.		

Global Incorrect Feedback
The correct answer is: .

Question 8b of 15 (3 Rationalizing Denominators 295573)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 2

Question: Which choice is equivalent to the fraction below when $x \geq 3$? *Hint: Rationalize the denominator and simplify.*

$$\frac{9}{\sqrt{x}-\sqrt{x-3}}$$

	Choice	Feedback
***A.**	$3(\sqrt{x}+\sqrt{x-3})$	Correct!
B.	$-3(\sqrt{x}-\sqrt{x-3})$	
C.	$3(\sqrt{x}-\sqrt{x-3})$	
D.	$3(\sqrt{x}-\sqrt{x-3})$	

Global Incorrect Feedback
The correct answer is: $3(\sqrt{x}+\sqrt{x-3})$.

Question 8c of 15 (3 Rationalizing Denominators 295574)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 2

Question: Which choice is equivalent to the fraction below when $x \geq 2$? *Hint: Rationalize the denominator and simplify.*

$$\frac{4}{\sqrt{x}-\sqrt{x-2}}$$

	Choice	Feedback
A.	$-2(\sqrt{x}-\sqrt{x-2})$	
B.	$2(\sqrt{x}+\sqrt{x-2})$	
***C.**	$-2(\sqrt{x}+\sqrt{x-2})$	Correct!
D.		

Global Incorrect Feedback
The correct answer is: .

Question 9a of 15 (1 Rationalizing Denominators 117987)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 2

Question: To get rid of radicals in the denominator of a fraction, you should *rationalize the denominator* by multiplying the fraction by a helpful form of _____.

	Choice	Feedback
A.	the denominator	
***B.**	1	Correct!
C.	the numerator	
D.	x	

Global Incorrect Feedback
The correct answer is: 1.

Question 9b of 15 (1 Rationalizing Denominators 295575)

Maximum Attempts: 1
Question Type: Multiple Choice
Maximum Score: 2
Question: To get rid of radicals in the denominator of a fraction, you should *rationalize the denominator* by multiplying the fraction by a helpful form of _____.

	Choice	Feedback
A.	the denominator	
B.	*x*	
C.	the numerator	
***D.**	1	Correct!

Global Incorrect Feedback
The correct answer is: 1.

Question 9c of 15 (1 Rationalizing Denominators 295576)

Maximum Attempts: 1
Question Type: Multiple Choice
Maximum Score: 2
Question: To get rid of radicals in the denominator of a fraction, you should *rationalize the denominator* by multiplying the fraction by a helpful form of _____.

	Choice	Feedback
***A.**	1	Correct!
B.	the denominator	
C.	the numerator	
D.	*x*	

Global Incorrect Feedback
The correct answer is: 1.

Question 10a of 15 (1 Rationalizing Denominators 117988)

Maximum Attempts: 1
Question Type: True-False
Maximum Score: 2
Question: To rationalize a denominator that has more than one term, you multiply the fraction by , where *B* is the conjugate of the numerator.

	Choice	Feedback
A.	True	
***B.**	False	Correct!

Global Incorrect Feedback
The correct answer is: False.

Question 10b of 15 (1 Rationalizing Denominators 295577)

Maximum Attempts: 1
Question Type: True-False
Maximum Score: 2
Question: To rationalize a denominator that has more than one term, you multiply the fraction by *B* + *B*, where *B* is the conjugate of the denominator.

	Choice	Feedback
A.	True	
***B.**	False	Correct!

Global Incorrect Feedback
The correct answer is: False.

Question 10c of 15 (1 Rationalizing Denominators 295578)

Maximum Attempts: 1
Question Type: True-False
Maximum Score: 2
Question: To rationalize a denominator that has more than one term, you multiply the fraction by $\frac{B}{B}$, where *B* is the conjugate of the denominator.

	Choice	Feedback
***A.**	True	Correct!
B.	False	

Global Incorrect Feedback
The correct answer is: True.

Question 11a of 15 (1 Rationalizing Denominators 117990)

Maximum Attempts: 1
Question Type: Multiple Choice
Maximum Score: 2
Question: If *a* and *b* are any real numbers, what is the *conjugate* of *a* + *b*?

	Choice	Feedback
A.	*a* + *b*	
B.	*a* *b*	
C.	*a* *b*	
***D.**	*a* - *b*	Correct!

Global Incorrect Feedback
The correct answer is: *a* - *b*.

Question 11b of 15 (1 Rationalizing Denominators 295579)

Maximum Attempts: 1
Question Type: Multiple Choice
Maximum Score: 2
Question: If *a* and *b* are any real numbers, what is the *conjugate* of *a* - *b*?

	Choice	Feedback
***A.**	*a* + *b*	Correct!
B.	*a* *b*	
C.	*a* *b*	
D.	*a* - *b*	

Global Incorrect Feedback
The correct answer is: *a* + *b*.

Question 11c of 15 (1 Rationalizing Denominators 295580)

Maximum Attempts: 1
Question Type: Multiple Choice
Maximum Score: 2
Question: If *a* and *b* are any real numbers, what is the *conjugate* of *a* + *b*?

	Choice	Feedback
A.	*a* + *b*	
B.	*a* ÷ *b*	
***C.**	*a* - *b*	Correct!
D.	*a* • *b*	

Global Incorrect Feedback
The correct answer is: *a* - *b*.

Question 12a of 15 (2 Rationalizing Denominators 117991)

Maximum Attempts: 1
Question Type: Multiple Choice
Maximum Score: 2
Question: What is the conjugate of 5 + $\sqrt{3}$?

	Choice	Feedback
A.	5 + $\sqrt{3}$	
***B.**	5 - $\sqrt{3}$	Correct!
C.	5 • $\sqrt{3}$	
D.	5 ÷ $\sqrt{3}$	

Global Incorrect Feedback
The correct answer is: 5 - .

Question 12b of 15 (2 Rationalizing Denominators 295581)

Maximum Attempts: 1
Question Type: Multiple Choice
Maximum Score: 2
Question: What is the conjugate of 5 - ?

	Choice	Feedback
***A.**	5 +	Correct!
B.	5 -	
C.	5	
D.	5	

Global Incorrect Feedback
The correct answer is: 5 + .

Question 12c of 15 (2 Rationalizing Denominators 295582)

Maximum Attempts: 1
Question Type: Multiple Choice
Maximum Score: 2
Question: What is the conjugate of $6 + \sqrt{2}$?

	Choice	Feedback
*A.	$6 - \sqrt{2}$	Correct!
B.	$6 + \sqrt{2}$	
C.	$6 \cdot \sqrt{2}$	
D.	$6 \div \sqrt{2}$	

Global Incorrect Feedback
The correct answer is: $6 - \sqrt{2}$.

Question 13a of 15 (2 Rationalizing Denominators 117993)

Maximum Attempts: 1
Question Type: Multiple Choice
Maximum Score: 2
Question: Multiplying by a conjugate gives a rational number because $(a + b)(a - b)$ = _____.

	Choice	Feedback
A.	$a^2 + b^2$	
B.	$a^2 \cdot b^2$	
*C.	$a^2 - b^2$	Correct!
D.	$a^2 \div b^2$	

Global Incorrect Feedback
The correct answer is: $a^2 - b^2$.

Question 13b of 15 (2 Rationalizing Denominators 295583)

Maximum Attempts: 1
Question Type: Multiple Choice
Maximum Score: 2
Question: Multiplying by a conjugate gives a rational number because $(a + b)(a - b)$ = _____.

	Choice	Feedback
*A.	$a^2 - b^2$	Correct!
B.	$a^2 \quad b^2$	
C.	$a^2 + b^2$	
D.	$a^2 \quad b^2$	

Global Incorrect Feedback
The correct answer is: $a^2 - b^2$.

Question 13c of 15 (2 Rationalizing Denominators 295584)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 2

Question: Multiplying by a conjugate gives a rational number because $(a + b)(a - b) =$ _____.

	Choice	Feedback
A.	$a^2 + b^2$	
B.	$a^2 \cdot b^2$	
C.	$a^2 \div b^2$	
***D.**	$a^2 - b^2$	Correct!

Global Incorrect Feedback
The correct answer is: $a^2 - b^2$.

Question 14a of 15 (1 Rationalizing Denominators 117995)

Maximum Attempts: 1

Question Type: True-False

Maximum Score: 2

Question: You can use conjugates to rationalize the denominator even when the denominator contains two radical terms.

	Choice	Feedback
***A.**	True	Correct!
B.	False	

Global Incorrect Feedback
The correct answer is: True.

Question 14b of 15 (1 Rationalizing Denominators 295585)

Maximum Attempts: 1

Question Type: True-False

Maximum Score: 2

Question: You can only use conjugates to rationalize the denominator when the denominator contains one radical term.

	Choice	Feedback
A.	True	
***B.**	False	Correct!

Global Incorrect Feedback
The correct answer is: False.

Question 14c of 15 (1 Rationalizing Denominators 295586)

Maximum Attempts: 1

Question Type: True-False

Maximum Score: 2

Question: You can rationalize the denominator using conjugates even when the denominator contains two radical terms

	Choice	Feedback
***A.**	True	Correct!
B.	False	

Global Incorrect Feedback
The correct answer is: True.

Question 15a of 15 (3 Rationalizing Denominators 117996)

Maximum Attempts: 1
Question Type: Multiple Choice
Maximum Score: 2
Question: Which choice is equivalent to the fraction below when *x* is an appropriate value? *Hint: Rationalize the denominator and simplify.*

$$\frac{\sqrt{12}}{\sqrt{3}-3}$$

	Choice	Feedback
A.	$-\sqrt{3}$	
B.	$-1+\sqrt{3}$	
C.	$-1-\sqrt{2}$	
***D.**	$-1-\sqrt{3}$	Correct!

Global Incorrect Feedback
The correct answer is: $-1-\sqrt{3}$.

Question 15b of 15 (3 Rationalizing Denominators 295587)

Maximum Attempts: 1
Question Type: Multiple Choice
Maximum Score: 2
Question: Which choice is equivalent to the fraction below when *x* is an appropriate value? *Hint: Rationalize the denominator and simplify.*

$$\frac{\sqrt{8}}{\sqrt{2}-2}$$

	Choice	Feedback
A.	-	
***B.**		Correct!
C.	-2 -	
D.	-2 +	

Global Incorrect Feedback
The correct answer is: .

Question 15c of 15 (3 Rationalizing Denominators 295588)

Maximum Attempts: 1
Question Type: Multiple Choice
Maximum Score: 2
Question: Which choice is equivalent to the fraction below when *x* is an appropriate value? *Hint: Rationalize the denominator and simplify.*

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	Choice	Feedback
A.	$-\sqrt{3}$	
***B.**	$-1+\sqrt{3}$	Correct!
C.	$-1-\sqrt{2}$	
D.	$-1-\sqrt{3}$	

Global Incorrect Feedback
The correct answer is: $-1+\sqrt{3}$.
