

Name: \_\_\_\_\_

Date \_\_\_\_\_

**Topic: Rationalize Denominators- Worksheet 1**

**Rationalize the denominator:**

1.

$$3/\sqrt{4}$$

2.

$$5/\sqrt{6}$$

**Write the conjugate for each binomial:**

3.

$$14 + \sqrt{8}$$

4.

$$10 - \sqrt{8}$$

**Find the reciprocal of the following:**

5.

$$12 + \sqrt{14}$$

6.

$$24 - \sqrt{30}$$

**Write an expression equivalent to:**

7.

$$12/(7 - \sqrt{4})$$

8.

$$(6 - \sqrt{7})/(6 + \sqrt{7})$$

**Rationalize the denominator and simplify if possible:**

9.

$$12/(3 + \sqrt{4})$$

10.

$$(4 + \sqrt{6})/(4 - \sqrt{6})$$



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**Topic: Rationalize Denominators- Worksheet 2**

**Rationalize the denominator:**

1.  $4/\sqrt{5}$                       2.  $6/\sqrt{7}$

**Write the conjugate for each binomial:**

3.  $15 + \sqrt{9}$                       4.  $11 - \sqrt{9}$

**Find the reciprocal of the following:**

5.  $13 + \sqrt{15}$                       6.  $25 - \sqrt{32}$

**Write an expression equivalent to:**

7.  $14/(9 - \sqrt{6})$                       8.  $(8 - \sqrt{9})/(8 + \sqrt{9})$

**Rationalize the denominator and simplify if possible:**

9.  $13/(4 + \sqrt{5})$                       10.  $(5 + \sqrt{7})/(5 - \sqrt{7})$



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**Topic: Rationalize Denominators- Worksheet 3**

**Rationalize the denominator:**

1.  $6/\sqrt{7}$                       2.  $8/\sqrt{10}$

**Write the conjugate for each binomial:**

3.  $17 + \sqrt{10}$                       4.  $15 - \sqrt{10}$

**Find the reciprocal of the following:**

5.  $15 + \sqrt{18}$                       6.  $8 - \sqrt{21}$

**Write an expression equivalent to:**

7.  $16/(10 - \sqrt{8})$                       8.  $(10 - \sqrt{11})/(10 + \sqrt{11})$

**Rationalize the denominator and simplify if possible:**

9.  $15/(5 + \sqrt{6})$                       10.  $(8 + \sqrt{10})/(8 - \sqrt{10})$



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**Topic: Rationalize Denominators- Worksheet 4**

**Rationalize the denominator:**

1.  $7/\sqrt{8}$

2.  $9/\sqrt{12}$

**Write the conjugate for each binomial:**

3.  $18 + \sqrt{11}$

4.  $16 - \sqrt{15}$

**Find the reciprocal of the following:**

5.  $12 + \sqrt{20}$

6.  $9 - \sqrt{22}$

**Write an expression equivalent to:**

7.  $20/(11 - \sqrt{9})$

8.  $(15 - \sqrt{20})/(15 + \sqrt{20})$

**Rationalize the denominator and simplify if possible:**

9.  $17/(9 + \sqrt{7})$

10.  $(5 + \sqrt{12})/(5 - \sqrt{12})$



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**Topic: Rationalize Denominators- Worksheet 5**

**Rationalize the denominator:**

1.  $10/\sqrt{12}$

2.  $18/\sqrt{20}$

**Write the conjugate for each binomial:**

3  
.  
 $21 + \sqrt{25}$

4.  $16 - \sqrt{17}$

**Find the reciprocal of the following:**

5  
.  
 $9 + \sqrt{12}$

6.  $8 - \sqrt{16}$

**Write an expression equivalent to:**

7.  $2/(5 - \sqrt{10})$

8.  $(13 - \sqrt{9})/(13 + \sqrt{9})$

**Rationalize the denominator and simplify if possible:**

9.  $7/(11 + \sqrt{2})$

10.  $(14 + \sqrt{6})/(14 - \sqrt{6})$

