

Exponents Rules

Name: _____

Date: _____

Rewrite each expression using product rule.

1) $54^{74} \times 54^{-15} =$ _____

2) $79^{-56} \times 79^{10} =$ _____

3) $96^{69} \times 96^{19} =$ _____

4) $68^{95} \times 68^{-31} =$ _____

5) $47^{77} \times 47^{14} =$ _____

6) $88^{12} \times 88^{-89} =$ _____

Rewrite each expression using quotient rule.

1) $47^{-55} \div 47^{-12} =$ _____

2) $89^{73} \div 89^7 =$ _____

3) $54^{-22} \div 54^{-92} =$ _____

4) $63^{48} \div 63^{-37} =$ _____

5) $96^{78} \div 96^{-20} =$ _____

6) $75^{-64} \div 75^{-5} =$ _____

Rewrite each expression using power rule.

1) $(83^7)^{-8} =$ _____

2) $(48^8)^6 =$ _____

3) $(55^5)^{13} =$ _____

4) $(92^{-10})^7 =$ _____

5) $(76^{-9})^{-9} =$ _____

6) $(68^{14})^7 =$ _____

Exponents Rules

Name: _____

Date: _____

Rewrite each expression using product rule.

- | | |
|--|--|
| 1) $54^{74} \times 54^{-15} =$ <u> 54^{59} </u> | 2) $79^{-56} \times 79^{10} =$ <u> $\frac{1}{79^{46}}$ </u> |
| 3) $96^{69} \times 96^{19} =$ <u> 96^{88} </u> | 4) $68^{95} \times 68^{-31} =$ <u> 68^{64} </u> |
| 5) $47^{77} \times 47^{14} =$ <u> 47^{91} </u> | 6) $88^{12} \times 88^{-89} =$ <u> $\frac{1}{88^{77}}$ </u> |

Rewrite each expression using quotient rule.

- | | |
|---|--|
| 1) $47^{-55} \div 47^{-12} =$ <u> $\frac{1}{47^{43}}$ </u> | 2) $89^{73} \div 89^7 =$ <u> 89^{66} </u> |
| 3) $54^{-22} \div 54^{-92} =$ <u> 54^{70} </u> | 4) $63^{48} \div 63^{-37} =$ <u> 63^{85} </u> |
| 5) $96^{78} \div 96^{-20} =$ <u> 96^{98} </u> | 6) $75^{-64} \div 75^{-5} =$ <u> $\frac{1}{75^{59}}$ </u> |

Rewrite each expression using power rule.

- | | |
|--|---|
| 1) $(83^7)^{-8} =$ <u> $\frac{1}{83^{56}}$ </u> | 2) $(48^8)^6 =$ <u> 48^{48} </u> |
| 3) $(55^5)^{13} =$ <u> 55^{65} </u> | 4) $(92^{-10})^7 =$ <u> $\frac{1}{92^{70}}$ </u> |
| 5) $(76^{-9})^{-9} =$ <u> 76^{81} </u> | 6) $(68^{14})^7 =$ <u> 68^{98} </u> |