



## Logarithm Algebra (Power Property) - Isolate Exponent, Two Binomials (Coefficient N) to Partial Answer

1

Use the power rule to simplify this equation  $2^{(-4r-8)} = 8^{(6r-8)}$

Use the power rule to simplify this equation  $9^{(8y-3)} = 8^{(-9y-7)}$

|                                    |                                    |                                    |                                    |
|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| $(A) (-4r-8) \ln 2 = (6r-8) \ln 8$ | $(B) (-4r+8) \ln 2 = (6r+8) \ln 8$ | $(A) (8y-3) \ln 9 = (-9y-7) \ln 8$ | $(B) (8y+3) \ln 9 = (-9y+7) \ln 8$ |
|------------------------------------|------------------------------------|------------------------------------|------------------------------------|

|                                     |  |
|-------------------------------------|--|
| $(C) (-8r-4) \ln 2 = (-8r+6) \ln 8$ |  |
|-------------------------------------|--|

|                                     |  |
|-------------------------------------|--|
| $(C) (-3y+8) \ln 9 = (-7y-9) \ln 8$ |  |
|-------------------------------------|--|

3

Use the power rule to simplify this equation  $6^{(5r+1)} = 3^{(-5r+5)}$

4

Use the power rule to simplify this equation

$$7^{(-9p-6)} = 4^{(-6p+1)}$$

|                                    |                                    |
|------------------------------------|------------------------------------|
| $(A) (5r-1) \ln 6 = (-5r-5) \ln 3$ | $(B) (5r+1) \ln 6 = (-5r+5) \ln 3$ |
|------------------------------------|------------------------------------|

|                                  |  |
|----------------------------------|--|
| $(C) (r+5) \ln 6 = (5r-5) \ln 3$ |  |
|----------------------------------|--|

|                                     |                                   |
|-------------------------------------|-----------------------------------|
| $(A) (-9p-6) \ln 7 = (-6p+1) \ln 4$ | $(B) (-6p-9) \ln 7 = (p-6) \ln 4$ |
|-------------------------------------|-----------------------------------|

|                                     |  |
|-------------------------------------|--|
| $(C) (-9p+6) \ln 7 = (-6p-1) \ln 4$ |  |
|-------------------------------------|--|

5

Use the power rule to simplify this equation  $6^{(-9y-9)} = 9^{(7y+5)}$

6

Use the power rule to simplify this equation

$$8^{(-7z+6)} = 10^{(-9z+5)}$$

|                                    |                                    |
|------------------------------------|------------------------------------|
| $(A) (-9y-9) \ln 6 = (7y+5) \ln 9$ | $(B) (-9y-9) \ln 6 = (5y+7) \ln 9$ |
|------------------------------------|------------------------------------|

|                                    |  |
|------------------------------------|--|
| $(C) (-9y+9) \ln 6 = (7y-5) \ln 9$ |  |
|------------------------------------|--|

|                                    |                                     |
|------------------------------------|-------------------------------------|
| $(A) (6z-7) \ln 8 = (5z-9) \ln 10$ | $(B) (7z+6) \ln 8 = (-9z+5) \ln 10$ |
|------------------------------------|-------------------------------------|

|                                     |  |
|-------------------------------------|--|
| $(C) (7z-6) \ln 8 = (-9z-5) \ln 10$ |  |
|-------------------------------------|--|

7

Use the power rule to simplify this equation  $9^{(-2t-3)} = 6^{(-1t+9)}$

8

Use the power rule to simplify this equation  $7^{(7p-6)} = 5^{(-7p-5)}$

|                                     |                                    |                                    |                                    |
|-------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| $(A) (-2t-3) \ln 9 = (-1t+9) \ln 6$ | $(B) (-3t-2) \ln 9 = (9t-1) \ln 6$ | $(A) (7p-6) \ln 7 = (-7p-5) \ln 5$ | $(B) (7p+6) \ln 7 = (-7p+5) \ln 5$ |
|-------------------------------------|------------------------------------|------------------------------------|------------------------------------|

|                                     |  |
|-------------------------------------|--|
| $(C) (-2t+3) \ln 9 = (-1t-9) \ln 6$ |  |
|-------------------------------------|--|

|                                     |  |
|-------------------------------------|--|
| $(C) (-6p+7) \ln 7 = (-5p-7) \ln 5$ |  |
|-------------------------------------|--|