



Logarithms - Product Property - Product to Sum (Integer Multiplication)



1 Convert the given logarithm to its equivalent based on the product property

$$\log_5(9 \cdot 2)$$

- | | |
|-------------------------|-------------------------|
| A $\log_2 9 + \log_2 5$ | B $\log_9 2 + \log_9 5$ |
| C $\log_9 5 + \log_9 2$ | D $\log_5 9 + \log_5 2$ |

2 Convert the given logarithm to its equivalent based on the product property

$$\log_8(3 \cdot 9)$$

- | | |
|-------------------------|--------------------------|
| A $\log_3 8 + \log_3 9$ | B $\log_9 3 + \log_9 8$ |
| C $\log_8 3 + \log_8 9$ | D $\log_8 11 + \log_8 7$ |

3 Convert the given logarithm to its equivalent based on the product property

$$\log_5(4 \cdot 6)$$

- | | |
|-------------------------|-------------------------|
| A $\log_4 5 + \log_4 6$ | B $\log_5 4 + \log_5 6$ |
| C $\log_4 6 + \log_4 5$ | D $\log_6 4 + \log_6 5$ |

4 Convert the given logarithm to its equivalent based on the product property

$$\log_9(7 \cdot 3)$$

- | | |
|--------------------------|-------------------------|
| A $\log_9 7 + \log_9 3$ | B $\log_7 9 + \log_7 3$ |
| C $\log_9 6 + \log_9 11$ | D $\log_7 3 + \log_7 9$ |

5 Convert the given logarithm to its equivalent based on the product property

$$\log_6(4 \cdot 10)$$

- | | |
|--------------------------|-------------------------------|
| A $\log_4 10 + \log_4 6$ | B $\log_6 4 + \log_6 10$ |
| C $\log_6 13 + \log_6 7$ | D $\log_{10} 4 + \log_{10} 6$ |

6 Convert the given logarithm to its equivalent based on the product property

$$\log_{10}(4 \cdot 5)$$

- | | |
|-------------------------------|--------------------------|
| A $\log_4 10 + \log_4 5$ | B $\log_4 5 + \log_4 10$ |
| C $\log_{10} 4 + \log_{10} 5$ | D $\log_5 4 + \log_5 10$ |

7 Convert the given logarithm to its equivalent based on the product property

$$\log_8(10 \cdot 4)$$

- | | |
|--------------------------|-------------------------------|
| A $\log_8 10 + \log_8 4$ | B $\log_{10} 8 + \log_{10} 4$ |
| C $\log_4 10 + \log_4 8$ | D $\log_{10} 4 + \log_{10} 8$ |

8 Convert the given logarithm to its equivalent based on the product property

$$\log_8(3 \cdot 4)$$

- | | |
|-------------------------|-------------------------|
| A $\log_3 8 + \log_3 4$ | B $\log_4 3 + \log_4 8$ |
| C $\log_8 3 + \log_8 4$ | D $\log_3 4 + \log_3 8$ |