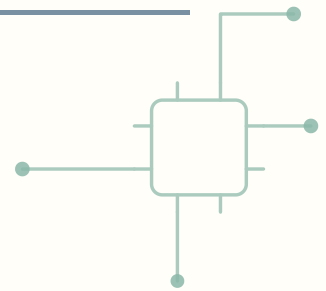


Algebra reasoning — Negative powers

Name: _____

Date: _____



Read each line of working and choose the answer that is correct.

1 On Mia's paper: $1 \div (x^6 \cdot x^{-3}) = 1/x^9$. Which line should replace it?

$1/x^3$

$-1/x^3$

x^3

$1/x^9$

Why? the minus in the exponent was ignored and the powers added.

2 Mia wrote $x^7 \cdot x^{-3} = x^{21}$. Which is correct?

x^4

x^{10}

$-x^4$

x^{21}

Why?

3 Sam's answer to $1 \div (x^6 \cdot x^{-2})$ is $1/x^{12}$. Which is correct?

x^4

$1/x^8$

$1/x^4$

$1/x^{12}$

Why?

4 Noor's answer to $x^7 \cdot x^{-2}$ is $-x^5$. Which is correct?

x^5

$1/x^5$

$-x^5$

x^9

Why?



Algebra reasoning · Negative powers — Answer key

1. $1 \div (x^6 \cdot x^{-3}) = 1/x^3$, not $1/x^9$ (the minus in the exponent was ignored and the powers added)

2. $x^7 \cdot x^{-3} = x^4$, not x^{21} (the two powers were multiplied instead of added)

3. $1 \div (x^6 \cdot x^{-2}) = 1/x^4$, not $1/x^{12}$ (the two powers were multiplied instead of added)

4. $x^7 \cdot x^{-2} = x^5$, not $-x^5$ (the minus was moved onto the answer instead of into the exponent)

