Félicitations ! Vous avez réussi !
POUR RÉUSSIR 75 % ou plus

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NOTE
100%

Graded quiz on Tangent Lines to Functions, Exponents and Logarithms

NOTE DE LA SOUMISSION LA PLUS RÉCENTE
100%

1. Convert $\frac{1}{49}$ to exponential form, using 7 as the factor. 1 / 1 point

- (●) 7^{-2}
- ( ) (7^2)
- ( ) $\frac{7}{7^3}$
- ( ) 49^{-1}

Correct
The rule for a factor to a Negative exponent is to divide by the same factor to a positive exponent with the same absolute value.

2. A light-year (the distance light travels in a vacuum in one year) is $9,460$ trillion meters. Express in scientific notation. 1 / 1 point

- ( ) 9460×10^{12} meters
- ( ) 0.946×10^{16}
- (●) 9.46×10^{15} meters.
- ( ) 9.46×10^{15} kilometers

Correct
$9,460$ is (9.4×10^3) meters and one trillion meters is 10^{12} meters. $(9.4 \times 10^3)(10^{12}) = 9.4 \times 10^{15}$. A kilometer is 1000 meters.

3. Simplify $(x^8)(y^3)(x^{-10})(y^{-2})$ 1 / 1 point

- ( ) $(x)(y^{-2})$
- ( ) $(x^{-80})(y^{-6})$
- ( ) $(x^2)(y)$
- (●) $(x^{-2})(y)$

Correct
By the Division and Negative Powers Rule, this is $(x^{[8-10]})(y^{[3-2]})$

4. Simplify $[(x^4)(y^{-6})]^{-1}$ 1 / 1 point

- (●) $(x^{-4})(y^6)$
- ( ) $\frac{(x^{-4})}{(y^6)}$
- ( ) $\frac{(x^4)}{(y^{-6})}$
- ( ) $(x^3)(y^{-7})$

Correct
By the Power to a Power Rule, each of the exponents is multiplied by (-1)

5. Solve for x: 1 / 1 point

$\log_2(39x) - \log_2(x-5) = 4$

- ( ) $\frac{23}{80}$
- (●) $\frac{-80}{23}$
- ( ) $\frac{39}{23}$
- ( ) $\frac{80}{38}$

Correct
$\log_2 \frac{39x}{(x-5)} = 4$ by the Quotient Rule.

Since both sides are equal, we can use them as exponents in an equation.

$\log_2 \frac{39x}{(x-5)}$