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.

$$2^{\log_2 \frac{39x}{(x-5)}} = 2^4$$

$$\frac{39x}{(x-5)} = 16$$

$$39x = 16 \times (x-5)$$

$$39x = 16x - 80$$

$$23x = -80$$

$$x = \frac{-80}{23}$$

6. Simplify this expression: 1 / 1 point

$(x^{\frac{1}{2}})^{\frac{-3}{2}}$

- $x^{\frac{4}{5}}$
- x^{-1}
- $x^{\frac{1}{3}}$
- ◉ $x^{\frac{-3}{4}}$

Correct

We use the Power to a Power Rule – multiply exponents:

$x^{\frac{1}{2} \times \frac{-3}{2}} = x^{\frac{-3}{4}}$

7. Simplify $\log_2 8 - \log_2 4 - (\log_5 4.5 + \log_5 2)$ 1 / 1 point

- 0
- ◉ -1
- 2
- 1

Correct

This is equivalent to:

$\log_2(\frac{8}{4}) - \log_5(4.5 \times 2) = 1 - 2 = -1$

8. If $\log_3 19 = 2.680$, what is $\log_9 19$? 1 / 1 point

- 5.216
- ◉ 1.304
- 0.4347
- 0.8934

il y a une coquille dans le questionnaire

Correct

To convert from $\log_3$ to $\log_9$, divide by $\log_3 9$. Which is equal to 2, so the answer is 1.34

9. If $\log_{10} b = 1.8$ and $log_a b = 2.5752$, what is a? 1 / 1 point

- 6
- ◉ 5
- 3
- 4

Correct

To solve for a in the formula;

$$\log_a b = \frac{\log_x b}{\log_x a}$$

$\log_a b = 2.5752$ and $\log_{10} b = 1.8$