Name_____Formative Assessment Solving Exponential Equations with logs period_____

Assume m, n, b > 0 b ≠ 1 and only letter in the rules below that can be any real number is w!

$\log_b m = w \ \ iff \ b^w = m$	$\log_b b = 1$	$\log_b m + \log_b n = \log_b(mn)$	$b^{\log_b m} = m$
$log\, m = w \ \ iff \ 10^w = m$	$\log_b 1 = 0$	$\log_b m - \log_b n = \log_b\left(\frac{m}{n}\right)$	$\log_b m = \frac{\log m}{\log b}$
$\ln m = w \ \ iff \ e^w = m$	$\log_b b^n = n$	$\log_b m^w = w \log_b m$	$\log_b m = \frac{\ln m}{\ln b}$

Solve equation (give answer as in EXACT form and rounded to three decimal places) Show your work in clear fashion!

1. $5 \cdot 2^{-3x+4} = 25$

Exact answer _____ Approximate answer rounded to three decimal places_____

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Solve equation (give answer as in EXACT form and rounded to three decimal places) Show your work in clear fashion!

1. $2 \cdot 5^{-2x+4} = 40$

Exact answer _____ Approximate answer rounded to three decimal places_____

Solve equation (give answer as in EXACT form and rounded to three decimal places) Show your work in clear fashion! 2. $6 \cdot 10^{2x+1} = 120$ Exact answer _____ Approximate answer rounded to three decimal places_____	Solve equation (give answer as in EXACT form and rounded to three decimal places) Show your work in clear fashion! 3. $-2 \cdot e^{4x+5} = -16$ Exact answer _____ Approximate answer rounded to three decimal places_____

Solve equation (give answer as in EXACT form and rounded to three decimal places) Show your work in clear fashion! 2. $7 \cdot 10^{3x+2} = 210$ Exact answer _____ Approximate answer rounded to three decimal places_____	Solve equation (give answer as in EXACT form and rounded to three decimal places) Show your work in clear fashion! 3. $-5 \cdot e^{2x-3} = -25$ Exact answer _____ Approximate answer rounded to three decimal places_____

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Solve equation (give answer as in EXACT form and rounded to three decimal places) Show your work in clear fashion!

1. $8 \cdot 3^{-5x+7} = 32$

Exact answer _____ Approximate answer rounded to three decimal places_____

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Solve equation (give answer as in EXACT form and rounded to three decimal places) Show your work in clear fashion!

1. $6 \cdot 4^{-5x+6} = 42$

Exact answer _____ Approximate answer rounded to three decimal places_____

Solve equation (give answer as in EXACT form and rounded to three decimal places) Show your work in clear fashion! 2. $8 \cdot 10^{5x+7} = 240$ Exact answer _____ Approximate answer rounded to three decimal places_____	Solve equation (give answer as in EXACT form and rounded to three decimal places) Show your work in clear fashion! 3. $-7 \cdot e^{3x+1} = -35$ Exact answer _____ Approximate answer rounded to three decimal places_____

Solve equation (give answer as in EXACT form and rounded to three decimal places) Show your work in clear fashion! 2. $4 \cdot 10^{2x+9} = 900$ Exact answer _____ Approximate answer rounded to three decimal places_____	Solve equation (give answer as in EXACT form and rounded to three decimal places) Show your work in clear fashion! 3. $-8 \cdot e^{4x-7} = -40$ Exact answer _____ Approximate answer rounded to three decimal places_____