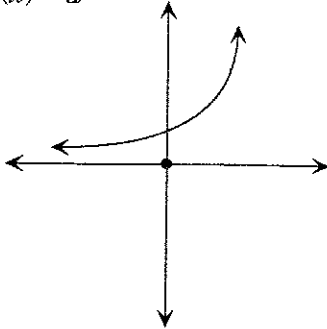


Concept Overview

Attachment D-2

<p>Concept Natural Logarithms</p>	<p>Examples Simplify:</p> $e^{6+5 \ln t}$ $= e^6 \cdot e^{5 \ln t}$ $= e^6 \cdot t^5$ $= e^6 t^5$	
<p>Characteristics</p> <ul style="list-style-type: none"> ➤ logs with base “e” are called natural logs ➤ similar to common logs ➤ $e^{\ln u} = u$ and $\ln e^u = u$, therefore $\ln e = 1$ 		
<p>What is it like?</p> <ul style="list-style-type: none"> ➤ It is similar to a common log where you must solve for the log's equation. 	<p>What is it unlike?</p> <ul style="list-style-type: none"> ➤ A natural log is unlike a transformation because they have different rules to solve them. 	<p>Can you illustrate it?</p> <p>$f(x) = a^x$</p> 
<p>Definition</p> <p>A natural log is a basic logarithm with a base “e.” $e^{\ln u} = u$ and $\ln e^u = u$ (therefore $\ln e = 1$). You can use this basic rule to solve the equation.</p>		<ul style="list-style-type: none"> ➤ The graph pictured above has the parent function $f(x) = a^x$. This represents the exponent function.

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