

Student Name: \_\_\_\_\_

Score: \_\_\_\_\_

### Change of Base Rule Worksheet

Apply natural logarithm to find the value using calculator. Round your answer to four decimal places:

<p><i>Example:</i> <math>\log_4 8</math></p> $\log_4 8 = \frac{\ln 8}{\ln 4} = \frac{2.07944154 \dots}{1.38629436 \dots} = 1.5$ <p><math>\log_4 8 = 1.5</math></p> <p>Answer: <b>1.5000</b></p>	<p><math>\log_2 7</math></p> <p>Answer: _____</p>
<p><math>\log_3 12</math></p> <p>Answer: _____</p>	<p><math>\log_6 5</math></p> <p>Answer: _____</p>
<p><math>\log_5 11</math></p> <p>Answer: _____</p>	<p><math>\log_2 6</math></p> <p>Answer: _____</p>
<p><math>\log_4 9</math></p> <p>Answer: _____</p>	<p><math>\log_3 2</math></p> <p>Answer: _____</p>

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### Answers

<p><i>Example:</i> <math>\log_4 8</math></p> $\log_4 8 = \frac{\ln 8}{\ln 4} = \frac{2.07944154 \dots}{1.38629436 \dots} = 1.5$ <p><math>\log_4 8 = 1.5</math></p> <p>Answer: <b>1.5000</b></p>	<p><math>\log_2 7</math></p> <p>Answer: <b>2.8074</b></p>
<p><math>\log_3 12</math></p> <p>Answer: <b>2.2619</b></p>	<p><math>\log_6 5</math></p> <p>Answer: <b>0.8982</b></p>
<p><math>\log_5 11</math></p> <p>Answer: <b>1.4899</b></p>	<p><math>\log_2 6</math></p> <p>Answer: <b>2.5850</b></p>
<p><math>\log_4 9</math></p> <p>Answer: <b>1.5850</b></p>	<p><math>\log_3 2</math></p> <p>Answer: <b>0.6309</b></p>