



Exponential Function Solution Equation - Growth (Discrete) Scenario to Rate

1

An insect population starts at 900. Each subsequent yearly breeding season it grows by a certain percent. After 8 years it has increased to a population of 1,140.

Rearrange the exponential equation to solve for for the rate given this scenario?

A	$r = \left(\frac{1140}{900}\right)^{\frac{8}{2}} - 1$	B	$r = \left(\frac{1140}{900}\right)^{\frac{1}{8}} - 1$
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C	$r = -\left(\frac{1140}{900}\right)^{\frac{1}{8}} + 1$
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2

A rabbit population starts at 600. Each subsequent yearly breeding season it grows by a certain percent. After 3 years it has increased to a population of 636 rabbits.

Rearrange the exponential equation to solve for for the rate given this scenario?

A	$r = \left(\frac{636}{600}\right)^{\frac{3}{2}} - 1$	B	$r = \left(\frac{636}{600}\right)^{\frac{1}{3}} - 1$
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C	$r = -\left(\frac{636}{600}\right)^{\frac{1}{3}} + 1$
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3

A credit card starts with \$300 of debt. Each subsequent quarter it grows by a certain percent interest. After 4 quarters the debt has grown to \$364.

Rearrange the exponential equation to solve for for the rate given this scenario?

A	$r = -\left(\frac{364}{300}\right)^{\frac{1}{4}} + 1$	B	$r = \left(\frac{364}{300}\right)^{\frac{4}{2}} - 1$
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C	$r = \left(\frac{364}{300}\right)^{\frac{1}{4}} - 1$
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4

An insect population starts at 700. Each subsequent yearly breeding season it grows by a certain percent. After 9 years it has increased to a population of 913.

Rearrange the exponential equation to solve for for the rate given this scenario?

A	$r = \left(\frac{913}{700}\right)^{\frac{1}{9}} - 1$	B	$r = -\left(\frac{913}{700}\right)^{\frac{1}{9}} + 1$
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C	$r = \left(\frac{913}{700}\right)^{\frac{9}{2}} - 1$
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5

An insect population starts at 600. Each subsequent yearly breeding season it grows by a certain percent. After 2 years it has increased to a population of 712.

Rearrange the exponential equation to solve for for the rate given this scenario?

A	$r = -\left(\frac{712}{600}\right)^{\frac{1}{2}} + 1$	B	$r = \left(\frac{712}{600}\right)^{\frac{2}{2}} - 1$
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C	$r = \left(\frac{712}{600}\right)^{\frac{1}{2}} - 1$
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6

An insect population starts at 400. Each subsequent yearly breeding season it grows by a certain percent. After 7 years it has increased to a population of 685.

Rearrange the exponential equation to solve for for the rate given this scenario?

A	$r = \left(\frac{685}{400}\right)^{\frac{1}{7}} - 1$	B	$r = \left(\frac{685}{400}\right)^{\frac{7}{2}} - 1$
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7

A credit card starts with \$600 of debt. Each subsequent year it grows by a certain percent interest. After 9 years the debt has grown to \$1,103.

Rearrange the exponential equation to solve for for the rate given this scenario?

A	$r = \left(\frac{1103}{600}\right)^{\frac{1}{9}} - 1$	B	$r = -\left(\frac{1103}{600}\right)^{\frac{1}{9}} + 1$
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8

A credit card starts with \$500 of debt. Each subsequent month it grows by a certain percent interest. After 8 months the debt has grown to \$796.

Rearrange the exponential equation to solve for for the rate given this scenario?

A	$r = \left(\frac{796}{500}\right)^{\frac{1}{8}} - 1$	B	$r = -\left(\frac{796}{500}\right)^{\frac{1}{8}} + 1$
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