ALBERT

Name _____ Date _____

Interpreting Parameters Worksheet

Algebra 1 · Common Core HSF-LE.B.5

> Interpret the parameters in a linear or exponential function in terms of a context.

Practice

Builds the skill step by step.

1. A plumber charges $C = 15 + 8h$ dollars for h hours. What does 8 mean?

   A. 8 jobs

   B. an 8-dollar fee

   C. 8 dollars per hour

   D. 8 hours of work

2. For $C = 15 + 8h$, what does 15 mean?

   A. the total for 1 hour

   B. 15 hours

   C. 15 dollars per hour

   D. a fixed 15-dollar fee

3. A town's population is $P(t) = 3000(1.04)^t$. By what percent does it grow each year?

4. For $P(t) = 3000(1.04)^t$, what is the starting population?

5. A car's value is $V = 25{,}000(0.85)^t$. By what percent does it lose value each year?

6. A car's distance is $d = 65t$ miles after t hours. What is its speed in miles per hour?

7. A candle's height is $y = 40 - 2x$ cm after x hours. What was its starting height?

8. For $y = 40 - 2x$ (candle height in cm after x hours), what does -2 mean?

   A. The candle is 2 cm tall.

   B. The candle burns 2 cm each hour.

   C. It burns for 2 hours.

   D. It grows 2 cm each hour.

9. Bacteria grow as $f(t) = 50 \cdot 2^t$, where t is in hours. By what factor does the count grow each hour?

10. An online order costs $1.25p + 4$ dollars for p pens. What is the price of each pen?

ALBERT

Name _____ Date _____

Interpreting Parameters Worksheet

Algebra 1 · Common Core HSF-LE.B.5

On Level

Grade-level practice.

1. A drink's temperature is $T(m) = 350 - 4m$ degrees after m minutes. By how many degrees does it cool each minute?

2. Lia's savings are $S = 200 + 25w$ dollars after w weeks. Explain what 200 and 25 mean.

3. An account grows as $A = 1500(1.035)^t$. What is the yearly growth rate?

4. A baby's length is $L = 50 + 1.8m$ cm after m months. What was the length at birth?

5. A dose of medicine follows $f(t) = 80(0.5)^t$ mg after t hours. What does 80 mean?

   A. the starting dose of 80 mg

   B. 80% is removed each hour

   C. 80 hours until gone

   D. 80 mg removed each hour

6. Gym A costs $30 + 20m$ dollars and Gym B costs $50 + 15m$ dollars for m months. What is the higher monthly rate?

7. A town's population is $P(t) = 12{,}000(0.97)^t$. By what percent does it shrink each year?

8. A car's value in thousands of dollars is $V = 18 - 0.5t$ after t years. How many dollars does it lose each year?

9. A population is $f(t) = 200 \cdot 3^t$ after t weeks. What is it after 2 weeks?

10. In $y = a \cdot b^t$, what does a represent?

    A. the number of periods

    B. the final value

    C. the starting value (when $t = 0$)

    D. the growth rate

ALBERT

Name _____ Date _____

Interpreting Parameters Worksheet

Algebra 1 · Common Core HSF-LE.B.5

Challenge

Multi-step and word problems that stretch it.

1. A phone plan costs $C(n) = 0.15n + 12$ dollars for n texts. What does a month with 200 texts cost?

2. $f(t) = 5000(1.06)^t$ and $g(t) = 5000 + 300t$. What is $f(2) - g(2)$?

3. A painting's value is $V(t) = 900(0.92)^t$ dollars after t years. Explain what 0.92 means.

4. A rental costs $R = 45d + 0.2m$ dollars for d days and m miles. What does a 3-day, 250-mile trip cost?

5. A plant's height is $y = 2.5x + 30$ cm after x weeks. After how many weeks is it 55 cm tall?

6. A rabbit population is $P = 800(1.25)^t$ after t years. What is the yearly growth rate?

7. A sample's carbon-14 is $A = 100(0.5)^{t/5730}$ after t years. After how many years is half of it left?

8. Savings are $S = 1200 - 75w$ dollars after w weeks. What does -75 mean?

   A. The savings last 75 weeks.

   B. It started with 75 dollars.

   C. 75 dollars are added each week.

   D. 75 dollars are spent each week.

9. An investment is worth $y = 10{,}000(1.08)^{t}$ dollars after t years. What is it worth after 1 year?

10. Compare the parameters of $A(t) = 1000 + 50t$ and $B(t) = 1000(1.05)^{t}$, both in dollars after t years.