



Modelling with a linear function

GRADE 8 MATH

Name _____

Date _____

Build the model, check it on both readings, and interpret both numbers in words.

WORKED EXAMPLE

Rate = difference PER unit. Initial value = the amount at $x = 0$, worked back to. Then say what each means.

1. A plant is 12 cm after 2 weeks and 24 cm after 5 weeks. Find the rate of growth.

APPLICATION

Show your thinking

Answer

2. Same plant. How tall was it at week 0?

APPLICATION

Show your thinking

Answer

3. Write the plant's model and check it on both readings.

APPLICATION

Show your thinking

Answer

4. Interpret both numbers in your model, in words, with units.

REASONING

Show your thinking

Answer

5. A phone is at 74% after 1 hour and 56% after 4 hours. Find the rate and the starting charge.

APPLICATION

Show your thinking

Answer

6. Why is the starting value usually NOT one of the numbers you were given?

REASONING

Show your thinking

Answer

7. A pool holds 500 litres at 0 minutes and 400 at 10 minutes. When will it be empty?

APPLICATION

Show your thinking

Answer

8. Why must you check a model on BOTH readings and not just one?

REASONING

Show your thinking

Answer

9. Write your own situation whose model is $y = 3x + 12$, and say what each number means.

REASONING

Show your thinking

Answer