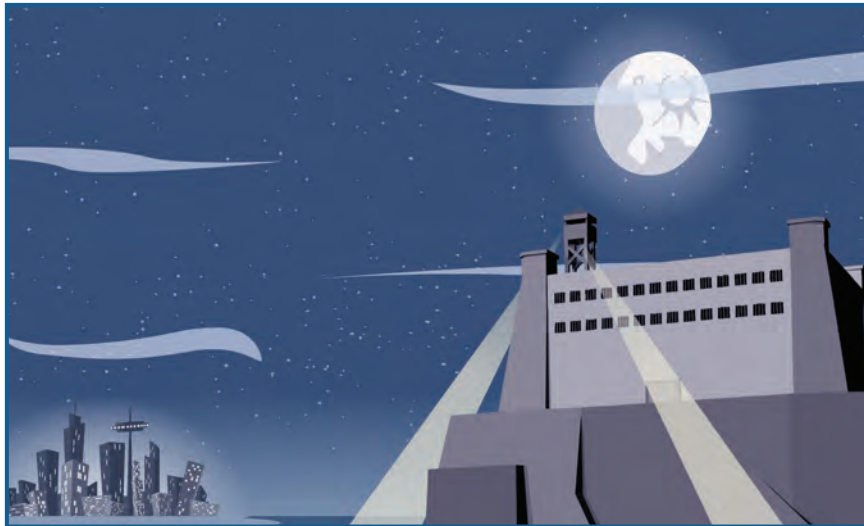


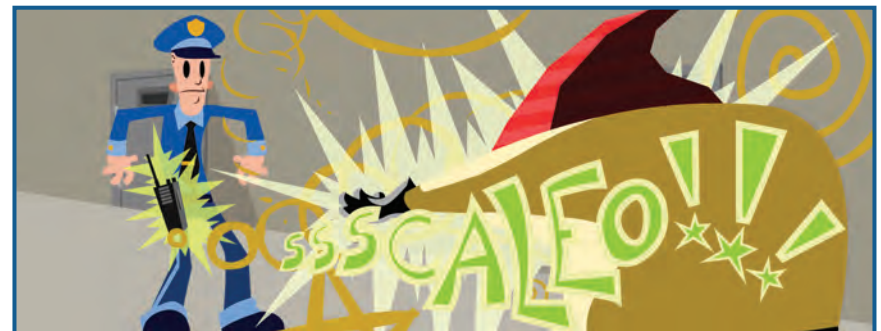
# MATH SNACKS

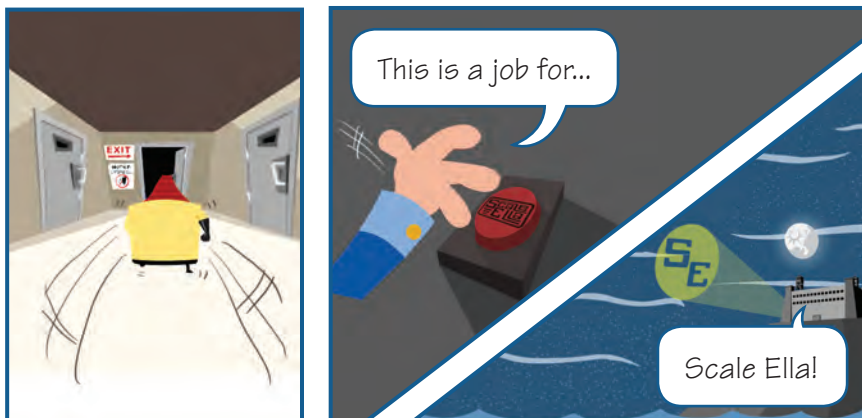
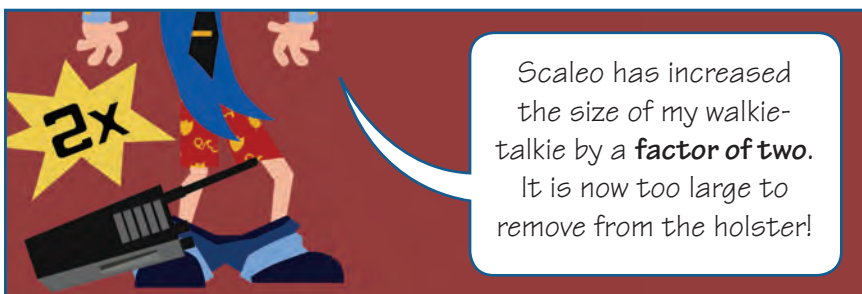
## Scale Ella

View the animation at <http://www.mathsnacks.org>



Fold Here

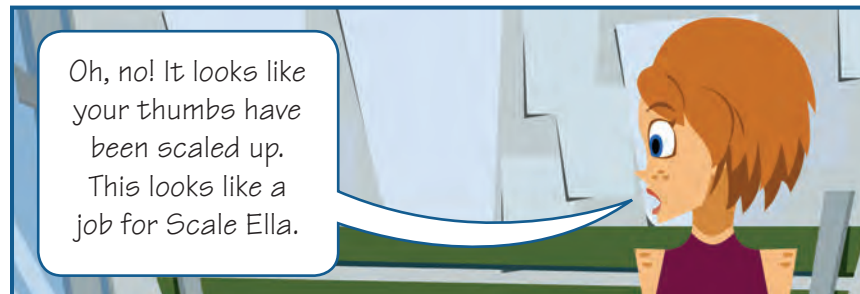
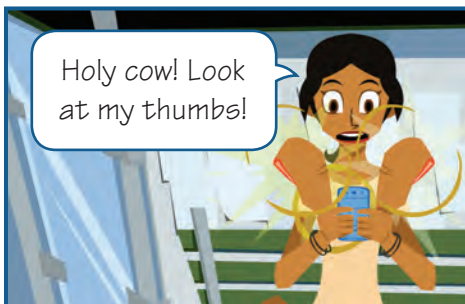




Janice texted me that Matt says that Eli says that Gerritt says that Pamela says that James said he likes me, and wants to know if I like him!









Fold Here

Your thumbs were  
2 inches tall.

Normal Size

Now, they are  
10 inches tall.

Scaled-Up Size

2 times what is 10?

$$\begin{array}{r} 2 \\ \times \text{What} \\ \hline 10 \end{array}$$

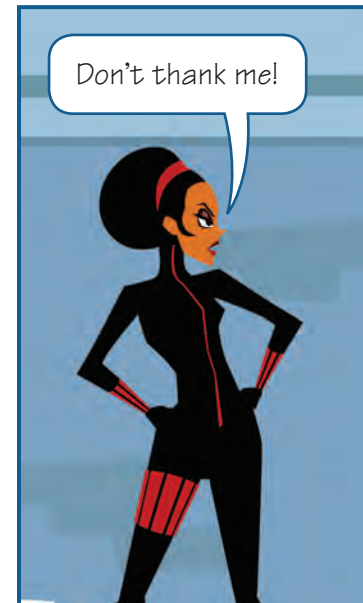
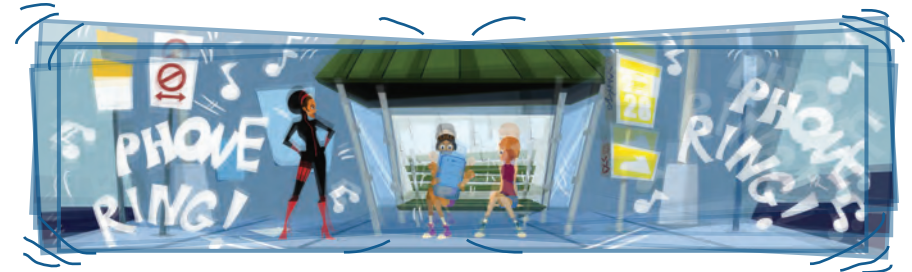
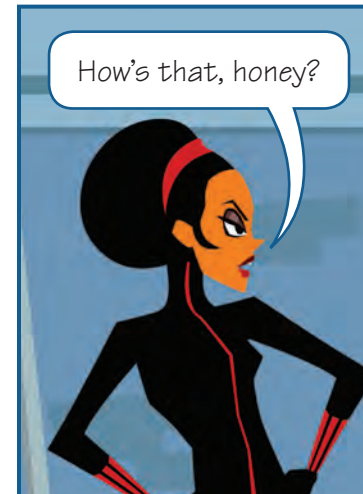
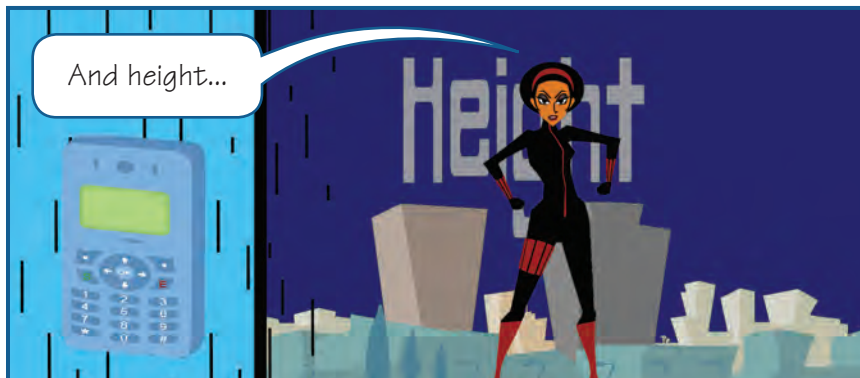
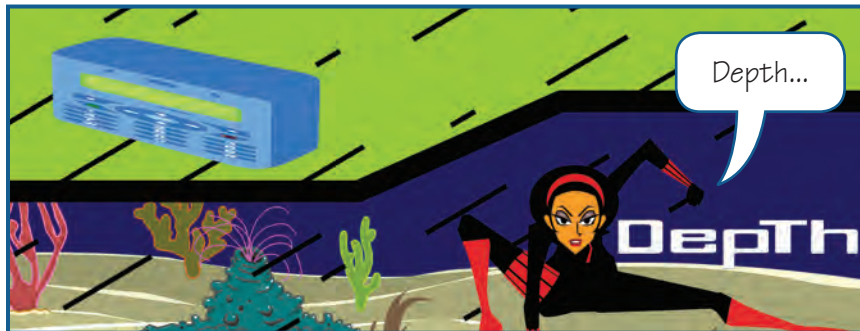
Five!

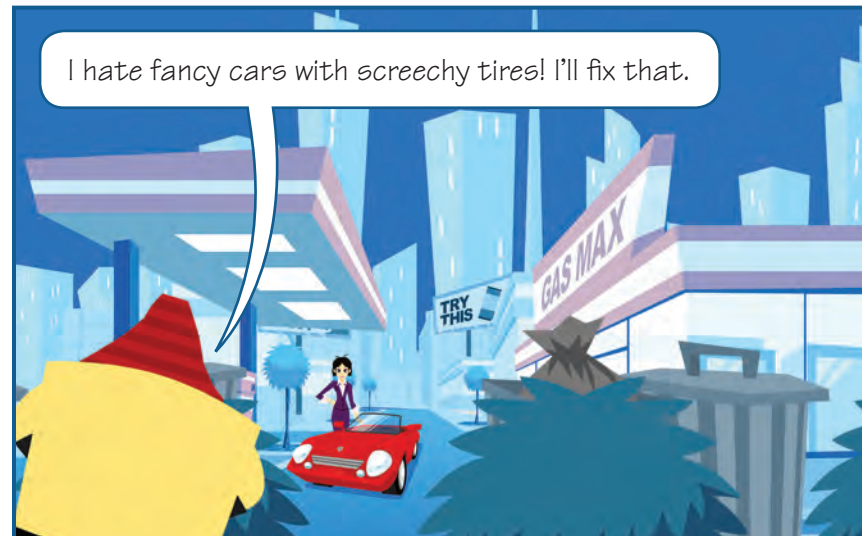
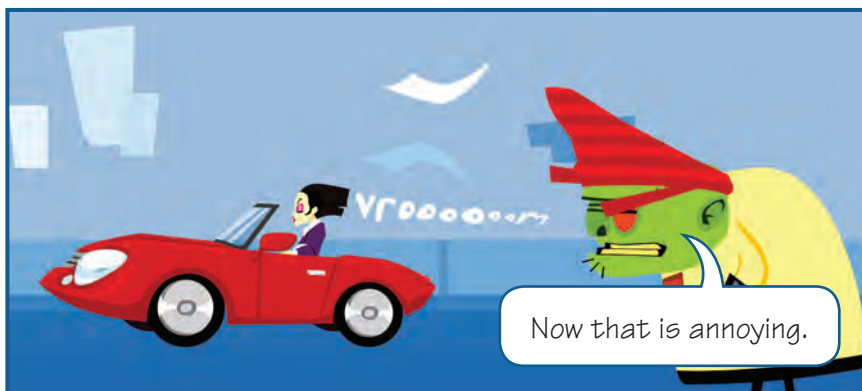
$$\begin{array}{r} 2 \\ \times 5 \\ \hline 10 \end{array}$$

**5**  
Scale  
Factor

Five is the  
scale factor!











Fold Here

Her tires were **21** inches tall.

Normal Size

Now, they are **7** inches tall. **21** times **what** is **7**?

Scaled-Down Size

$$\frac{21 \times \text{What} = 7}{21 \quad 21}$$

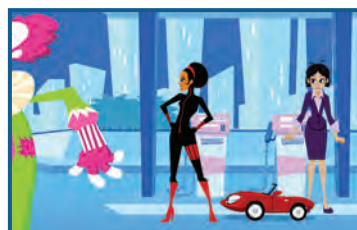
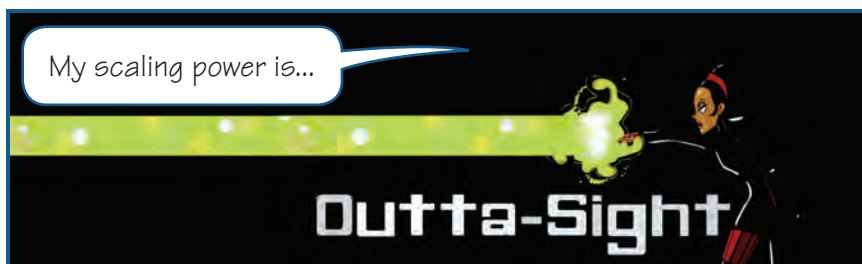
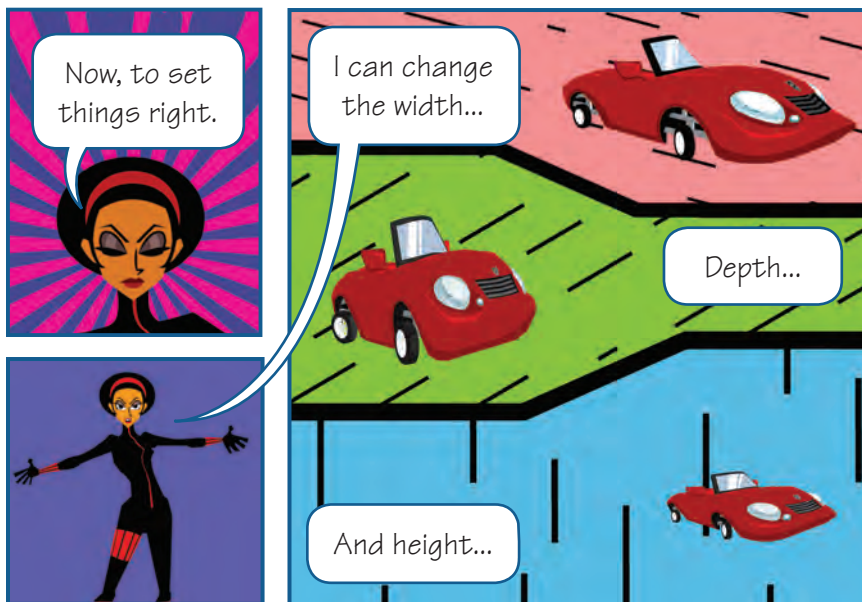
Divide both sides by **21**.

What equals **7** over **21**? Reduce **7** over **21** to  $\frac{1}{3}$ .

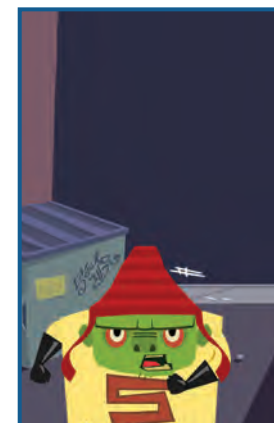
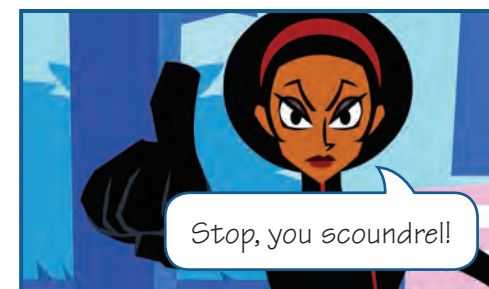
$$\frac{7}{21} = \frac{1}{3}$$

**Scale Factor**

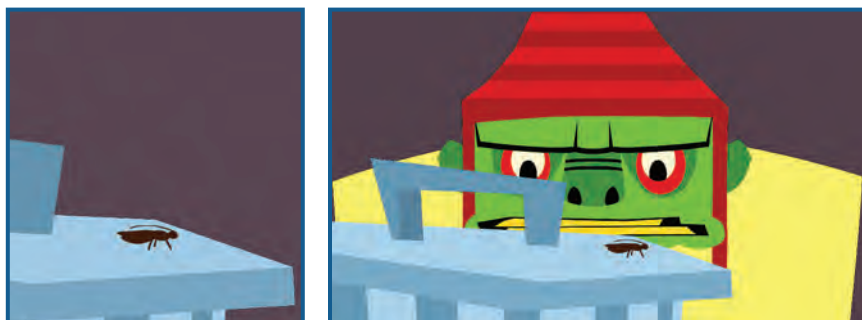
$\frac{1}{3}$  is my...



Fold Here







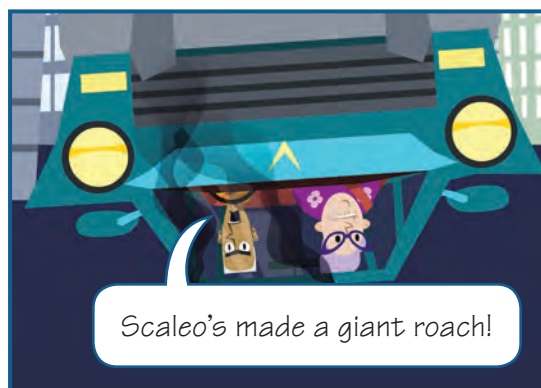




Fold Here



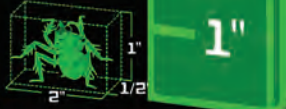




Fold Here



A cockroach is about **an inch** long.



Normal Size

But now...



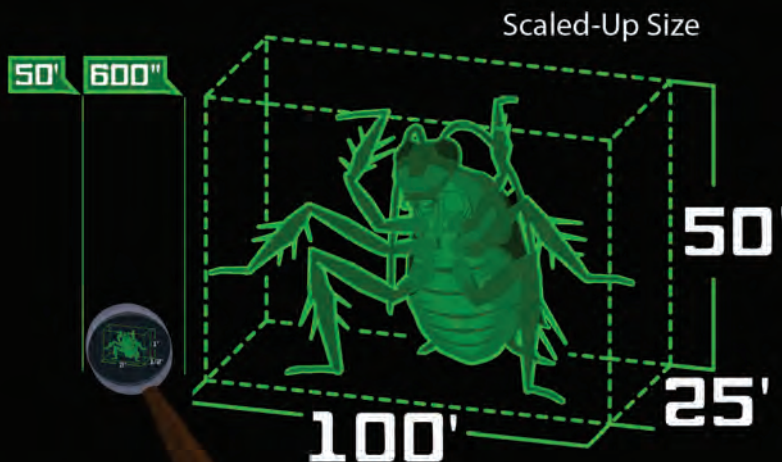
The roach is **50 feet** long. That's **600 inches**!

$$50' = 600''$$

Fifty Feet

Equals

Six-Hundred Inches



What times 1 equals 600?

$$\text{What} \times 1 = 600''$$

In other words,  
600 divided

$$\frac{600''}{\text{What}} = 1$$

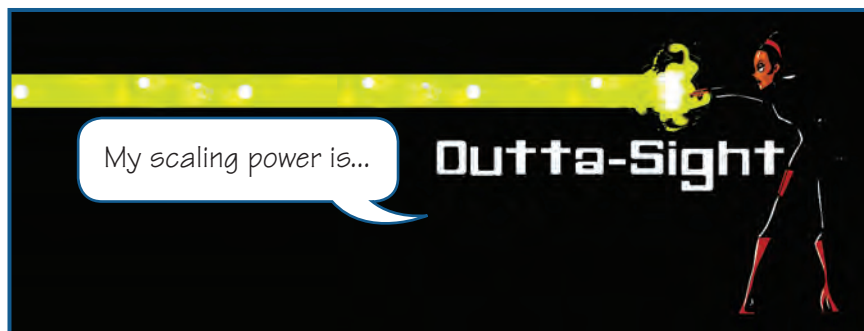
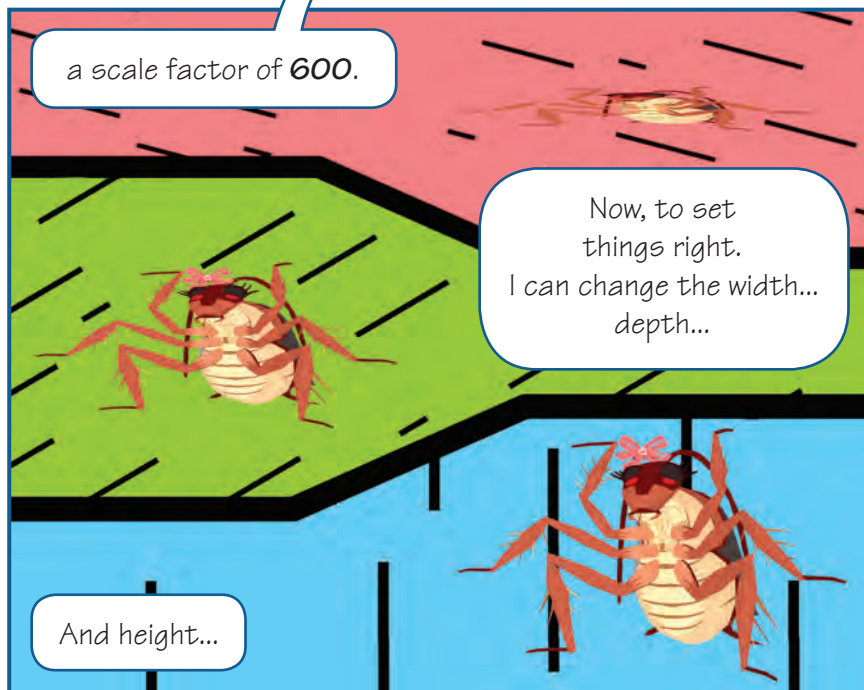
by What is 1?

$$\frac{600''}{600''} = 1$$

600 divided by  
600 is 1.

**Scale  
Factor  
600**

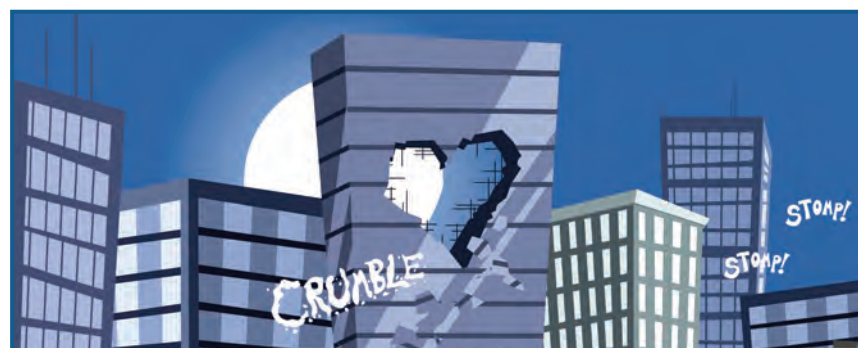
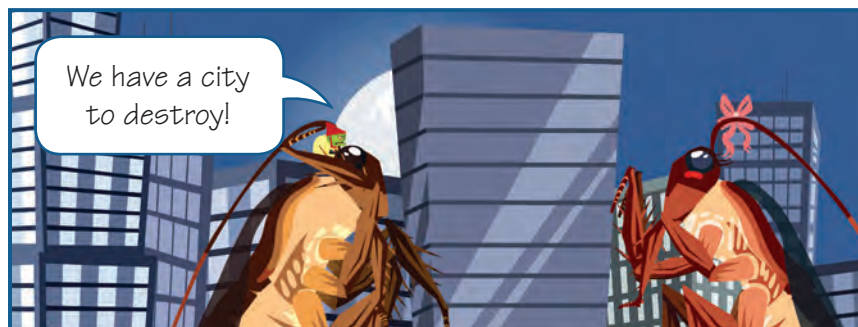
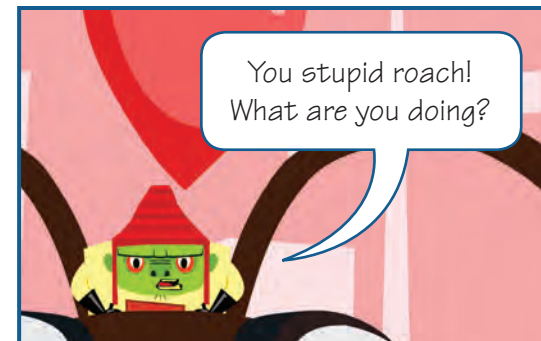
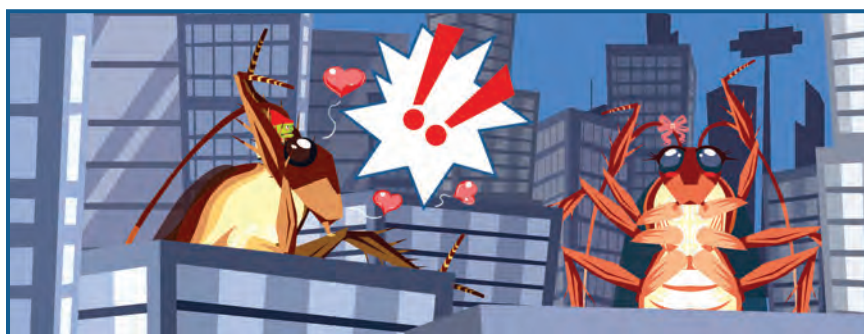




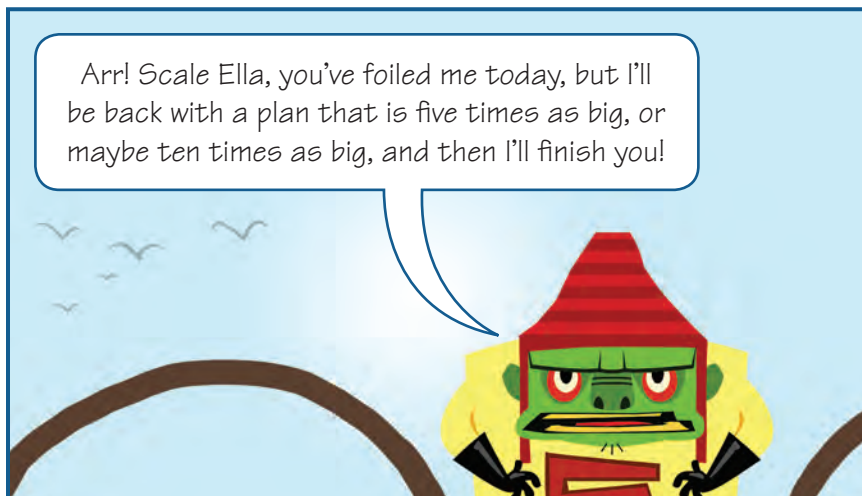
Fold Here



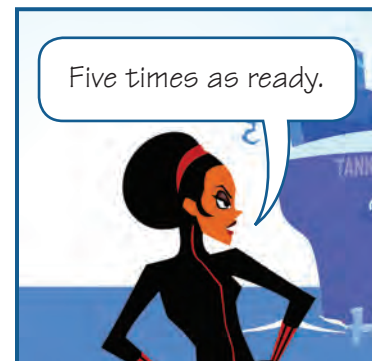








Fold Here



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