1.2 Powers and Exponents

ESSENTIAL QUESTION

How can you use repeated factors in real-life situations?

COMMON CORE STATE STANDARDS

6.EE.1 Write and evaluate numerical expressions involving whole-number exponents.

base $2^4 \leftarrow POWER$

In a power, the exponent tells you how many times to multiply the base times itself.

Power	Words Three squared, or three to the second			
3 ²				
3 ³	Three cubed, or three to the third			
34	Three to the fourth			

EXAMP	LE 📵	Writing Exp	ressions	as Powers				
Write each product as a power.								
a.	4 · 4	.4.4.4		45				
b.	12 x	12 x 12	1	173				

On Your Own

Write the product as a power.

EXAMPLE 2 Finding Values of Powers

Find the value of each power.



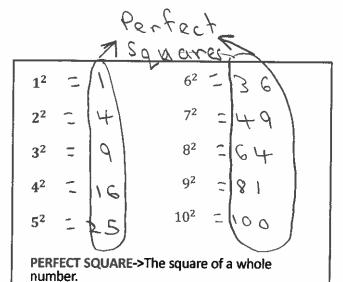
On Your Own

Find the value of the power.



On Your Own

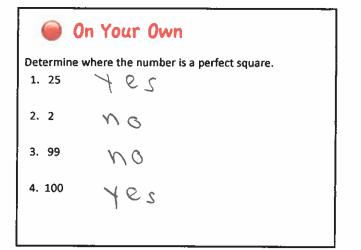
Find the value of the power.

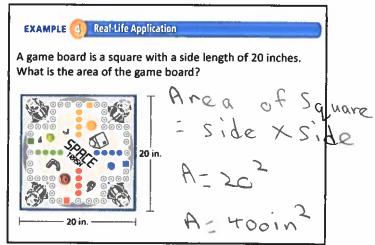


EXAMPLE [3] Identifying Perfect Squares

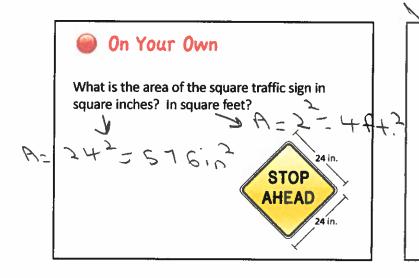
Determine whether each number is a perfect square.

- a. 64 4 Q S
- b. 20 🕥 🐧





The Area of the game board is 400in.



CLOSURE

The theoretical ride capacity for Skyrush (at Hershey Par, PA) is 1350 riders per hour. There are 2 trains with 32 drivers each. How many rides is this per hour?