

Name: _____

Date: _____

Chapter 2 Review

Learning Goal 2.1	I can identify the base and exponent of a power and understand the relationship between powers and repeated multiplication.
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Developing							
1. Identify the base, exponent and power of each expression.							
a. 3^{52}	b. $(-7)^{23}$	c. 2^{-18}	d. -4^{67}	e. 5^{25}	f. $(-12)^0$	g. 1^{-100}	

b. $(-7)^{23}$ base: -7
 exponent: 23
 power: $(-7)^{23}$

d. -4^{67} base: 4
 exponent: 67
 power: 4^{67}

Developing					
2. Write the following numbers as repeated multiplication, then evaluate. Do not leave answers as decimals, only as fractions where appropriate.					
a. 3^5	b. 7^3	c. 2^8			
d. 4^6	e. 5^2	f. 12^0	g. 1^{10}		
Proficient					
a. $(-3)^3$	b. -3^3		c. -6^2		
d. $(-6)^2$	e. -5^4		f. $(-5)^4$		
Extending					
a. $(-4)^{-3}$	b. -4^{-3}	c. -2^{-4}			
d. $(-2)^{-4}$	e. -10^{-5}	f. $(-10)^{-5}$			

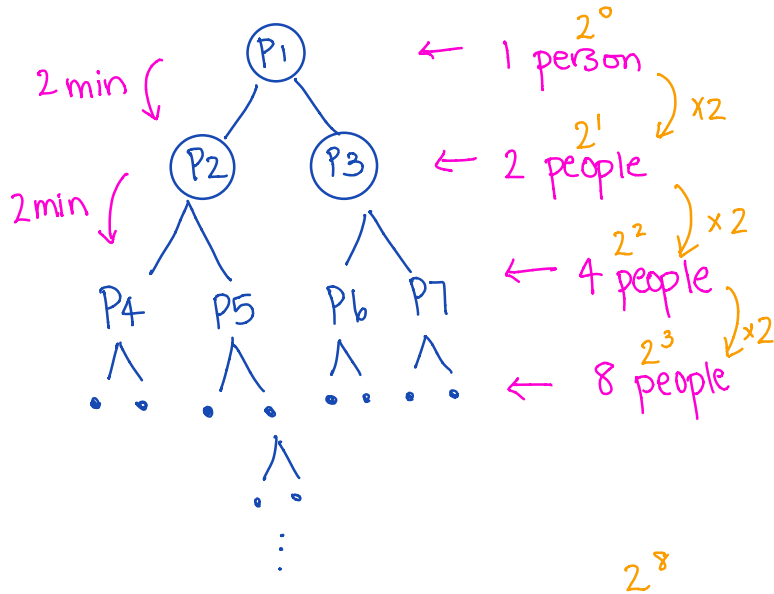
b. $7^3 = 7 \times 7 \times 7$
 $= 343$

a. $(-3)^3 = (-3) \times (-3) \times (-3)$
 $= -27$

c. $-2^{-4} = -\frac{1}{2^4} = -\frac{1}{2 \times 2 \times 2 \times 2}$
 $= -\frac{1}{16}$

Extending

3. A text message tree is used to send messages. The person at the top texts 2 people. Each person texts 2 more people. Suppose it takes 1 minute to ~~text~~ ^{text} someone. A message is relayed until the bottom row of the tree has 256 people. How long does it take? How do you know?



256 people just in the bottom row

8 branches
to work down
at 2 minutes
each

So the tree takes
16 minutes in
total.

$$2^8$$