6th Grade Name: _____

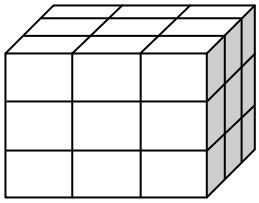
A.6 Worksheet 1 Date: _____ Period: ____

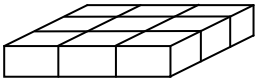
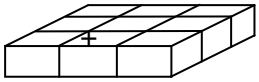
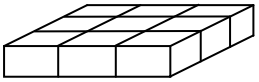
Models of Cubes

Remember-we can find the value of a perfect cube by making a model:

Example:

Look at this cube:



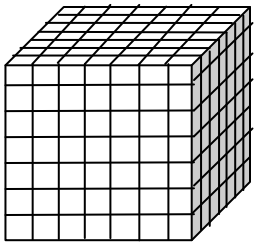
=  +  + 

You can express the value of this cube two ways: $3^3 = 27$ (a number cubed) or

$\sqrt[3]{27} = 3$ (a cube root)

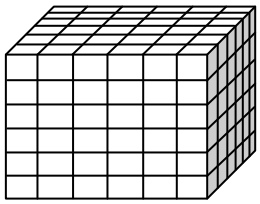
Express the value of these cubes in two different ways:

1.



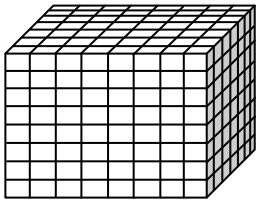
Write the value as a number cubed:

Write the value as a cube root:

2. 

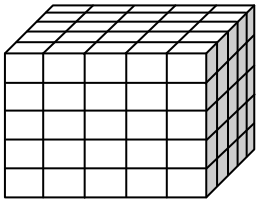
Write the value as a number cubed:

Write the value as a cube root:

3. 

Write the value as a number cubed:

Write the value as a cube root:

4. 

Write the value as a number cubed:

Write the value as a cube root:

Find the value of each perfect cube:

1. 3^3

2. 5^3

3. 10^3

4. 1^3

5. 7^3

6. 20^3

Find each cube root:

7. $\sqrt[3]{27}$

8. $\sqrt[3]{729}$

9. $\sqrt[3]{64}$

10. $\sqrt[3]{1{,}000}$

11. $\sqrt[3]{8{,}000}$

12. $\sqrt[3]{125}$

Find the value of x for each equation:

13. $x^3 = 8$

x = _____

14. $x^3 = 216$

x = _____

15. $x^3 = 1$

x = _____

16. $x^3 = 343$

x = _____

17. $x^3 = 27$

x = _____

18. $x^3 = 64$

x = _____