

27. Numbers & Operations

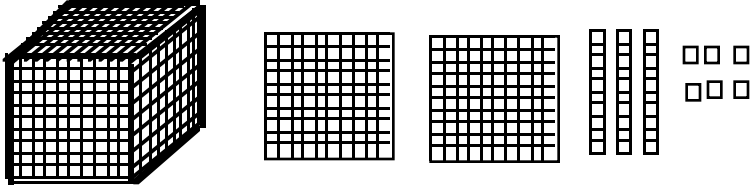
Decimals Gr. 7
N-70, N-71a

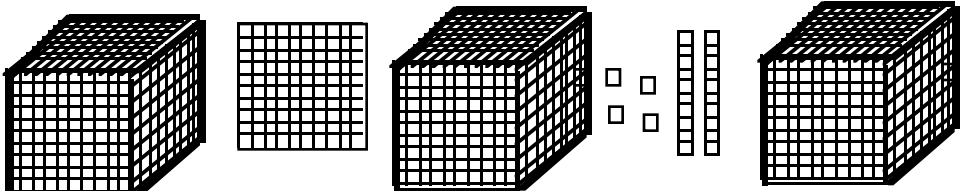
Materials: base ten blocks
(large cubes can be made using 10 flats (hundreds))

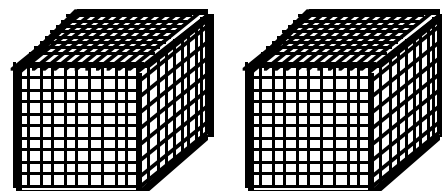
1. Use the large cube to represent 1 whole.

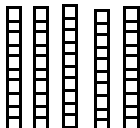
- a) What do the flats represent in this case?
- b) What do the rods represent in this case?
- c) What do the units represent in this case?


2. Construct the following with base 10 blocks and record the number.

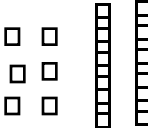
a) 

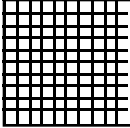
b) 

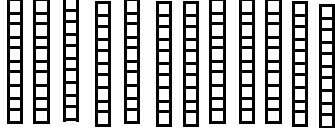
c) 

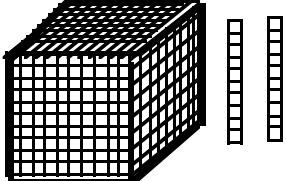
d) 

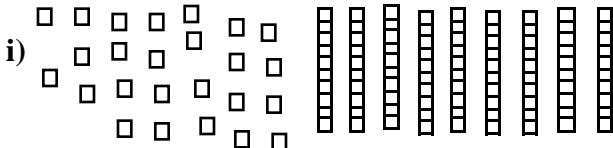
e) 

f) 

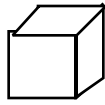
g) 

h) 

h) 

i) 

3. **Build the following with base ten blocks. Record by using base ten rubber stamps or use these sketches:**



one



tenths



hundredths



thousandths

- a) **2.7** b) **3.926** c) **0.34**
d) **0.004** e) **1.037** f) **2.300**

4. a) **Write the decimal numbers in each of numbers 2 and 3 in order of increasing size.**
b) **Explain your strategy.**

When you have completed this station,
place your base ten blocks in their containers
and answer sheet in your portfolio.
Label your portfolio entry.

Please tidy up the station.

28. Numbers & Operations

Decimals
N-61

Gr. 7

Materials: ruler
paper

1. Use a number line to put each of the following sets of numbers in order of increasing size:

a) 12.1897 12.1 12.0954 12.897

b) 0.0012 0.0120 0.1200 1.200

2. How can you quickly put the following sets of numbers in order of increasing size without using manipulatives or a number line?

a) 3.0124 12.0124 1000.0124 189.0124

b) 309.222 309.22 309.2222

c) 45.4000 45.4130 45.4100 45.4136

3. A friend of yours says that the following numbers are in order of increasing size because they are placed in order of increasing number of digits. Write him a letter (using correct letter format) to explain to him why his reasoning does not always work. In which case does it work?

Make up an envelope (use correct format) and place your letter in the envelope.

23.1113 23.113 23.13

When you have completed this station,
place your answer sheet and your envelope
in your portfolio.
Label your portfolio entry.

Please tidy up the station.

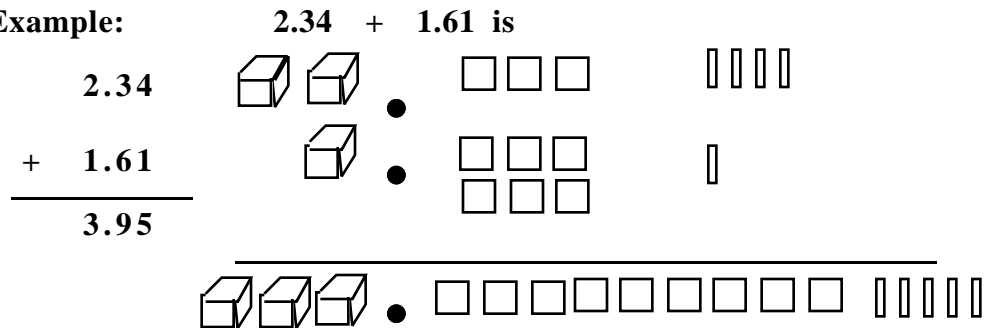
29. Numbers & Operations

Decimals Gr. 7
N-62, N-10

Materials: base ten blocks

1. Use the base ten blocks to add and record each step using pictures as you calculate $2.908 + 0.394$.

Example:



2. Calculate $42 + 2.3114 + 0.113$ without a calculator. Explain your reasoning.
3. Write
- a two digit whole number
 - a number that is less than one thousandth
 - a decimal number with 4 digits and with no whole number
 - a decimal number to represent 63 hundredths
 - Find the sum of the above four numbers.
4. True or False
- The sum of $5.230 + 0.123$ will be about 5 because $5+0 = 5$.
 - The total of $0.6 + 0.46 + 24.8 + 30$ will be less than 55.
5. Make up 5 true or false adding questions.

When you have completed this station,
place your answer sheet in your portfolio.
Put the base ten blocks in their container.

Label your portfolio entry.

Please tidy up the station.

30. Numbers & Operations

Decimals Gr. 7
N-10, N-62

Materials: base ten blocks

1. Use the base ten blocks to subtract and record each step using pictures as you calculate $2.205 - 1.897$

Example:

$2.34 - 1.61$ is

2.34

- 1.61

1.34

Please note that the drawings of the base ten blocks represent the addend, and the ones that are crossed out are the subtrahends.

2. Calculate $34 - 0.1731$ without a calculator. Explain your reasoning.
3. Make up 4 pairs of decimal numbers. Find the difference of the numbers in each pair.
4. True or False
- The difference of 56.146 and 0.146 is 56 because the same fractional part is being subtracted.
 - The difference of 56.34 and 0.23 has to be less than 56 .
 - The difference between 1 and 0.23 will be a fraction.
5. Make up 5 true or false adding questions.

When you have completed this station,
place your answer sheet in your portfolio.
Put the base ten blocks in their container.
Label your portfolio entry.

Please tidy up the station.

31. Numbers & Operations

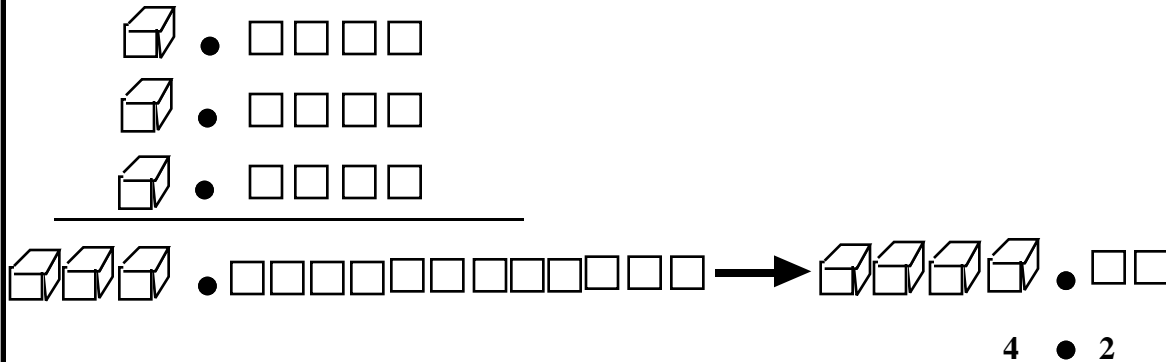
Decimals Gr. 7
N-10, N-65

Materials: base ten blocks

1. Use base ten blocks to calculate the following:

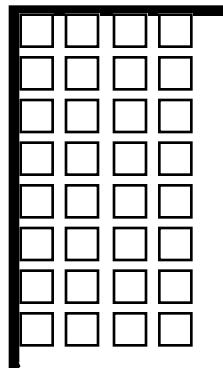
- a) 2.5×4 b) 1.324×3 c) 75.55×2

Example 1.4×3



2. Use base ten blocks to calculate the following: 0.5×0.4

Example: 0.4×0.8



$$0.4 \times 0.8 = 0.32$$

3. a) I know that 2.3×4.1 is a little more than 8 because
b) I know that 0.9×2.1 is about 2 because
c) I know that 0.2×0.2 is a less than 1 because

When you have completed this station,
place your answer sheet in your portfolio.
Put the base ten blocks in their container.
Label your portfolio entry.

Please tidy up the station.

32. Numbers & Operations

Decimals Gr. 7
N-9, N-10, N-12
N-66, N-76

Materials: calculator

1. **Julie's mother is buying some fabric to make her a dress. She has \$25.00. She needs 1.7 m. The fabric she chooses costs \$16.00 a metre. How much will the fabric cost?**
- a) **Estimate the cost of the fabric. Explain your strategy.**

 - b) **Which mental calculation strategies could you use?**

 - b) **Use a paper and pencil to show your work to calculate the exact cost.**

 - c) **Use a calculator to determine if she has enough money. Write in order, the keys that you used.**

 - d) **Discuss the advantages and disadvantages of each of the above methods.**

 - e) **Which method are you likely to use if you have \$35.00 to spend?**
 - i) **at home the night before the actual purchase**
 - ii) **at the store at the time of the purchase**
 - iii) **in the car on the way to the store**

When you have completed this station,
place your answer sheet in your portfolio.
Shut the calculator off.
Label your portfolio entry.

Please tidy up the station.