RESOURCE DOCUMENT #1

Teachers guide

Hundred Chart

Colour code the hundred chart to show multiples and common multiples of different numbers. Create a key to show.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Multiples of 4

Multiples of 5

Common multiples of 4 and 5

Have students create patterns for multiples and common multiples of other numbers on similar hundred charts. See sample chart below.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Resource Document #2

Games for multiplication
Multiplication Snap

1.) Remove the face cards from the deck, shuffle the remaining cards and distribute the cards evenly between two players.

2.) Each player keeps their pile of cards face down. Together, each player turns over a card.

3.) The first player to multiply the two numbers together and state the answer is the winner and takes the cards.

4.) The player with the most cards in a specific amount of time is the winner **OR** when one player has all the cards.

Roll the Dice

1. Aim: Using dice players take turns rolling two dice and the first player to multiply the dice by a specific number gains a point.

2. First, establish the number that the dice will be multiplied by. Example: if working on the 9 times table, each time the dice are rolled, the number should be multiplied by 9. Or, if working on squares, each time the dice are rolled the number rolled is multiplied by itself.

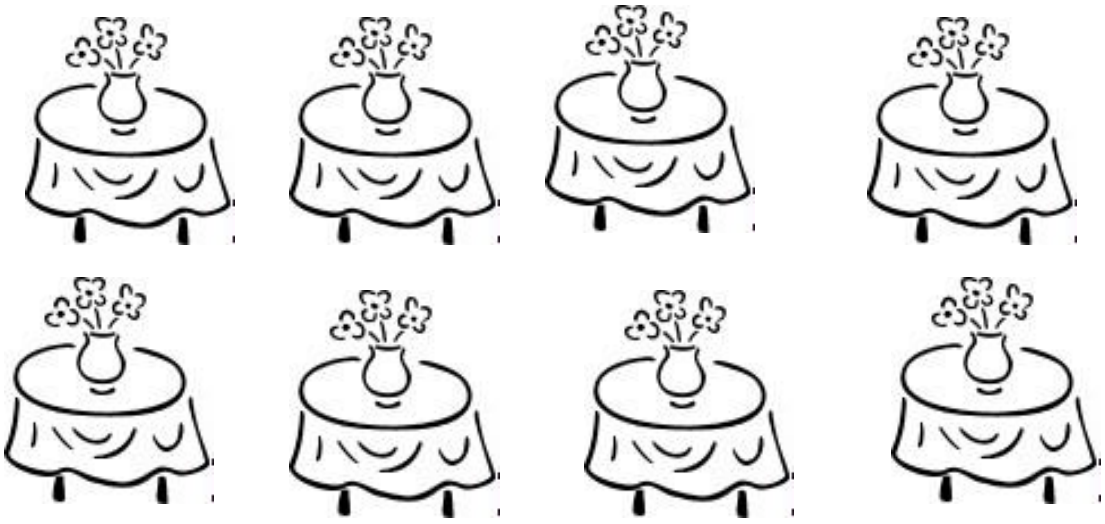
3. Alternative: A variation of this game is for one player to roll the dice after the other player specifies the number to be used to multiply the number on the dice. This will gives each child an active part.

RESOURCE DOCUMENT # 3

1. There are 250 chairs to be arranged in a room. What are the possible ways in which these chairs could be arranged to show equal number of chairs in each row? What if 2 chairs were taken out, how would this affect the number of arrangements to be done?

Have students draw the possible arrangements:

2. A florist bought a bouquet of flowers for a wedding reception. She wants to ensure that there are equal number of flowers on each table. If the bouquet contains 24 flowers, what are the possible numbers of flowers for each table? How many possible tables could there be? Show the different possible arrangements below.



RESOURCE DOCUMENT #4

Teacher's guide

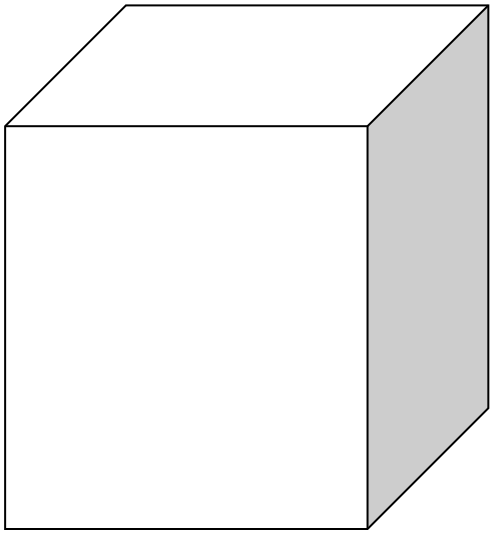
1. Engage in discussion that will allow students to recall that our number system is a *base ten* system and it uses *powers of ten* as the building blocks with which we count. Students should see that each place value is ten times more than the place value to its immediate right.

2. After students establish the relationship with each place value as they go up the place value chart, ask them how they would represent the relationship going down the place value chart. Students should see that each place value is ten times less than the place value to its immediate left.

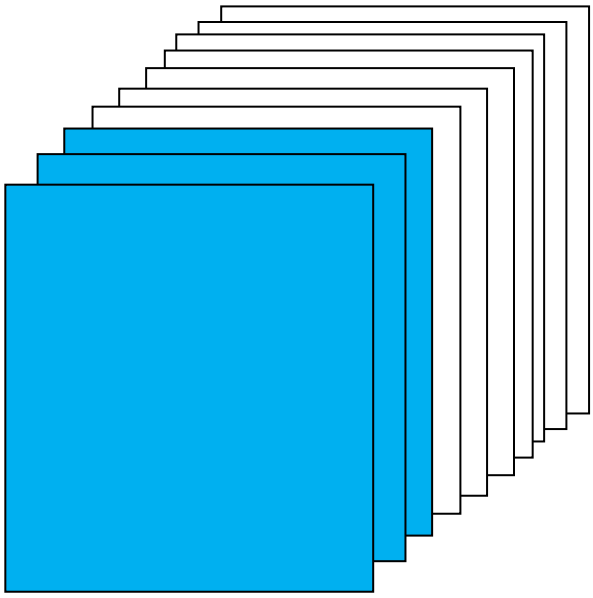
3. Use manipulative or hundred grid to further demonstrate $\frac{1}{10}$and to further extend the place value to thousandth. Discuss the whole being divided into ten equal parts of which one out of the ten parts is called a tenth. Further guide them to see that if each tenth is divided into ten parts then each part becomes$\frac{1}{100}$. Students should realize that the place value to the right of tenth is hundredth.

   (See page 5 below, for example of this)

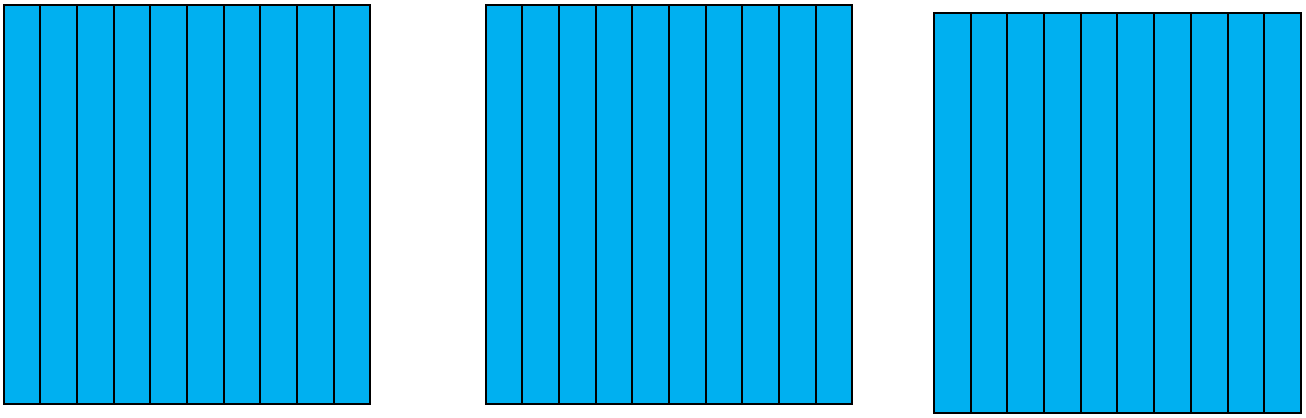
A block of cheese is shared so that Tom get 3/10. How can his portion be shown in decimal form?



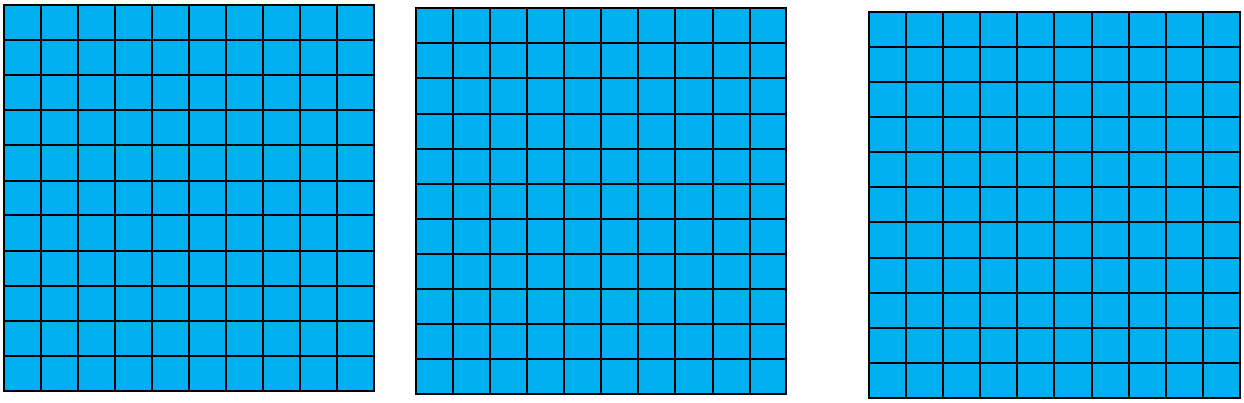
Whole block of cheese



Whole divided into tenths.
3/10 0r 0.3 shades in blue represents Tom's share.



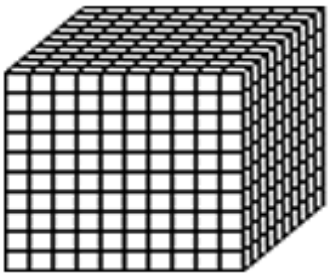
Based on the whole, pictures immediately above represents Tom's 3/10 or 0.3 of the whole further being divide into ten equal parts each to show 30/100 or 0.30

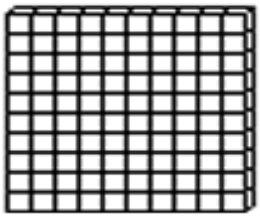


Based on the whole, Tom's share that was 30/100 or 0.30 is further divided into ten equal parts each. The representation immediately above now represents Tom's share being 300/1000 or 0.300. All these fractions or decimals are equivalent.

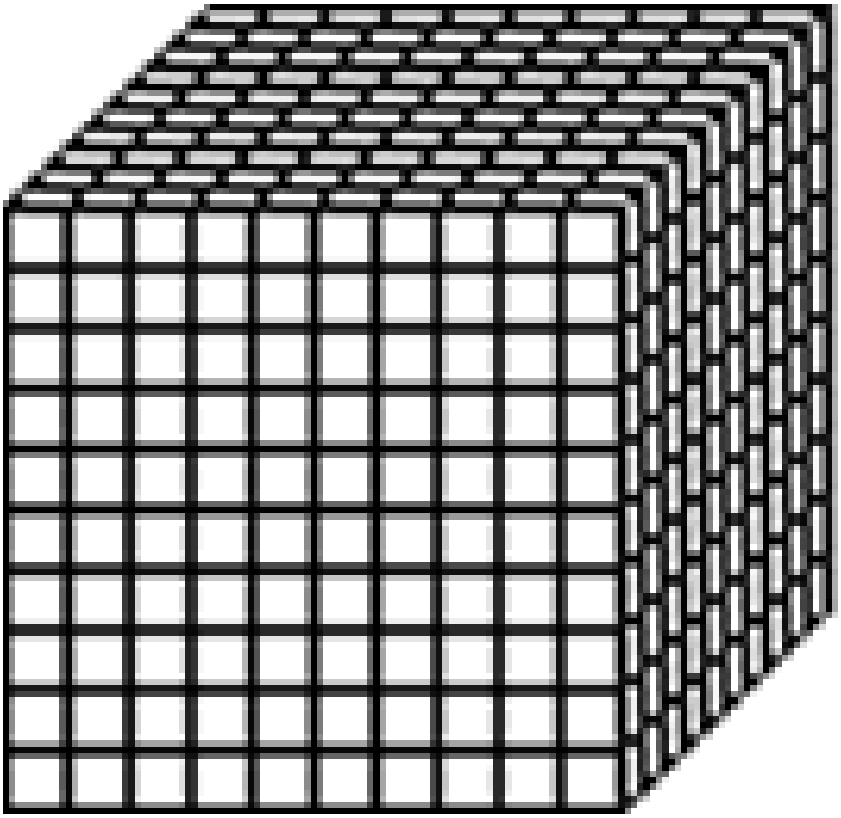
RESOURCES DOCUMENT #5

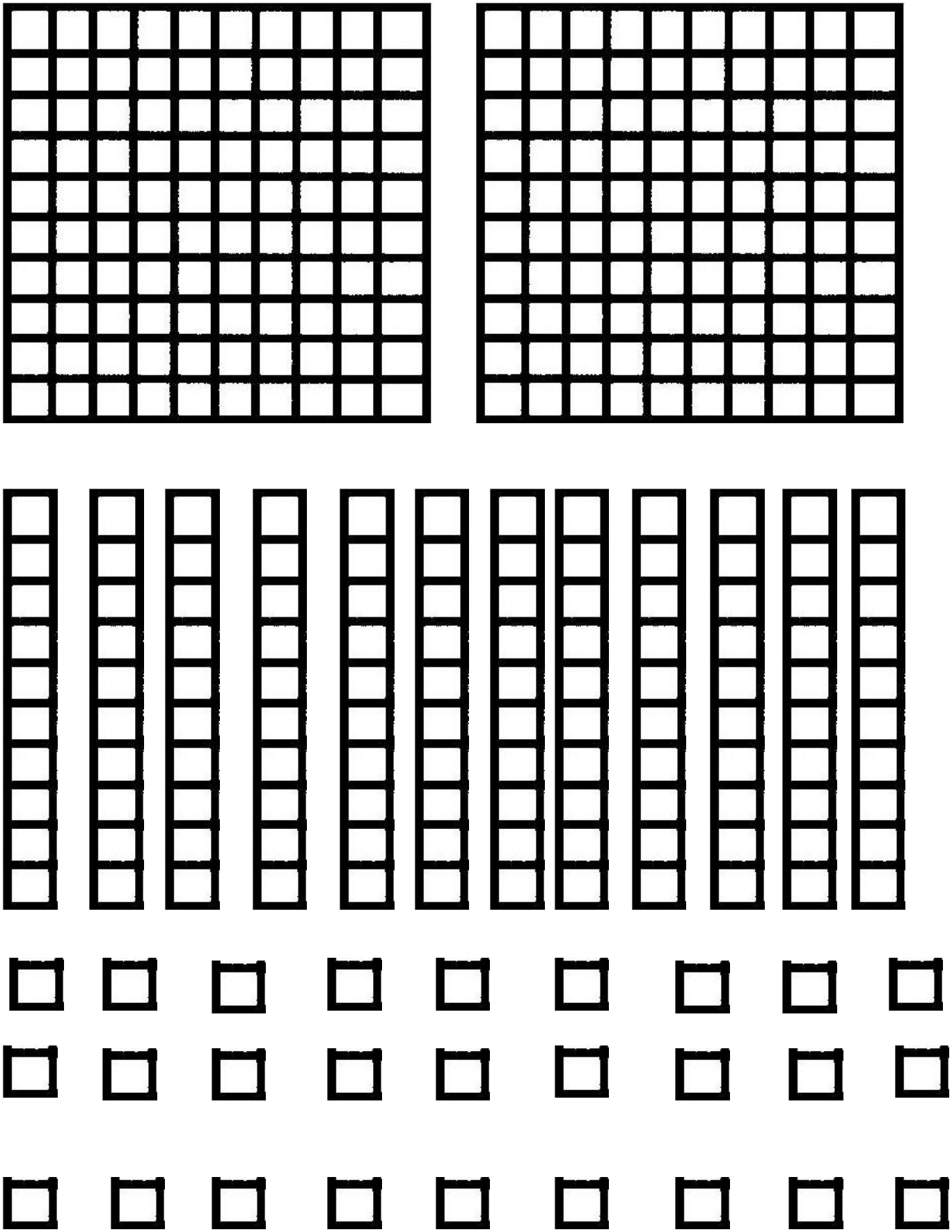
Base Ten Printable (Teacher's guide)





0ne whole	tenth	hundredth	thousandth
1	0.1 or 1/10	0.01	0.001 or 1/1000





RESOURCE DOCUMENT #6

Decimal Bingo

$7\frac{3}{10}$	$\frac{773}{100}$	7.025
$\frac{7}{100}$	$\frac{75}{100}$	7.0
0.7	0.007	$\frac{77}{10}$

$7\frac{3}{10}$	0.007	$\frac{77}{10}$
7.0	$\frac{75}{100}$	$\frac{7}{100}$
0.7	$\frac{773}{100}$	7.025

$7\frac{3}{10}$	$\frac{773}{100}$	0.7
$\frac{75}{100}$	$\frac{7}{100}$	7.0
7.025	0.007	$\frac{77}{10}$

$7\frac{3}{10}$	0.007	7.025
$\frac{7}{100}$	$\frac{75}{100}$	$\frac{77}{10}$
$\frac{773}{100}$	0.7	7.0

7.0	$\frac{773}{100}$	$\frac{77}{10}$
$\frac{7}{100}$	$7\frac{3}{10}$	$\frac{75}{100}$
0.7	0.007	7.025

$\frac{7}{100}$	$\frac{77}{10}$	7.025
$7\frac{3}{10}$	$\frac{75}{100}$	7.0
0.007	0.7	$\frac{773}{100}$

$\frac{773}{100}$	$7\frac{3}{10}$	$\frac{7}{100}$
7.025	7.0	$\frac{75}{100}$
0.7	0.007	$\frac{77}{10}$

$7\frac{3}{10}$	$\frac{773}{100}$	7.025
$\frac{7}{100}$	0.7	0.007
$\frac{75}{100}$	7.0	$\frac{77}{10}$

$7\frac{3}{10}$	0.7	$\frac{7}{100}$
7.025	7.0	$\frac{75}{100}$
$\frac{773}{100}$	0.007	$\frac{77}{10}$

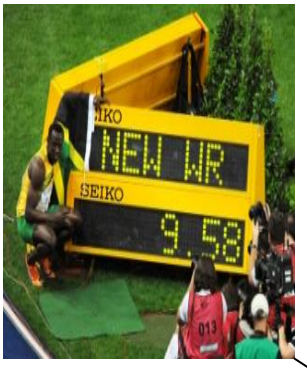
Questions

Seven tenth	**Seven and twenty five thousandth**	**Zero point zero seven**
Seven thousandth	**Point seven five**	**Seventy three tenths**
Seven point seven	**Seventy tenth**	**Seven hundredth**

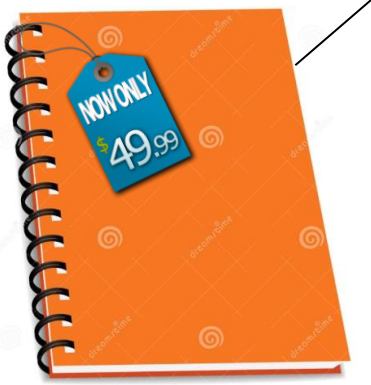
RESOURCE DOCUMENT #7

Decimals In Real Life Worksheet

Below are some examples of decimals in real life. Complete the diagram by placing other examples in the empty spaces provided



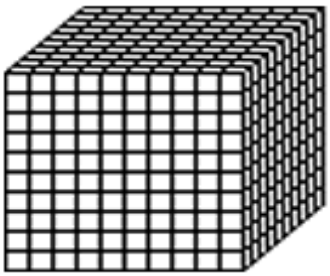
Decimals and real life

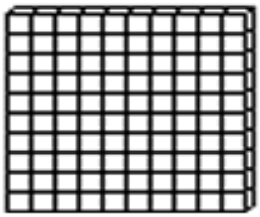


RESOURCE DOCUMENT #8

Representing Decimals

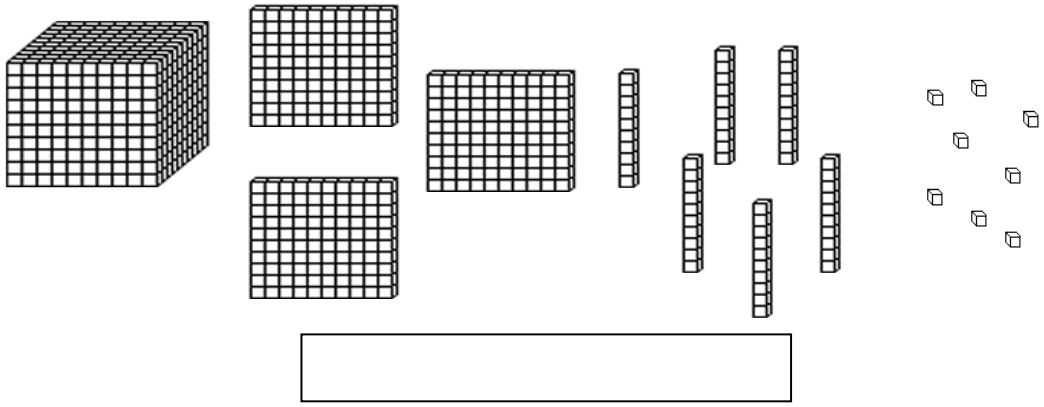
Use the information from the diagram below to represent the following

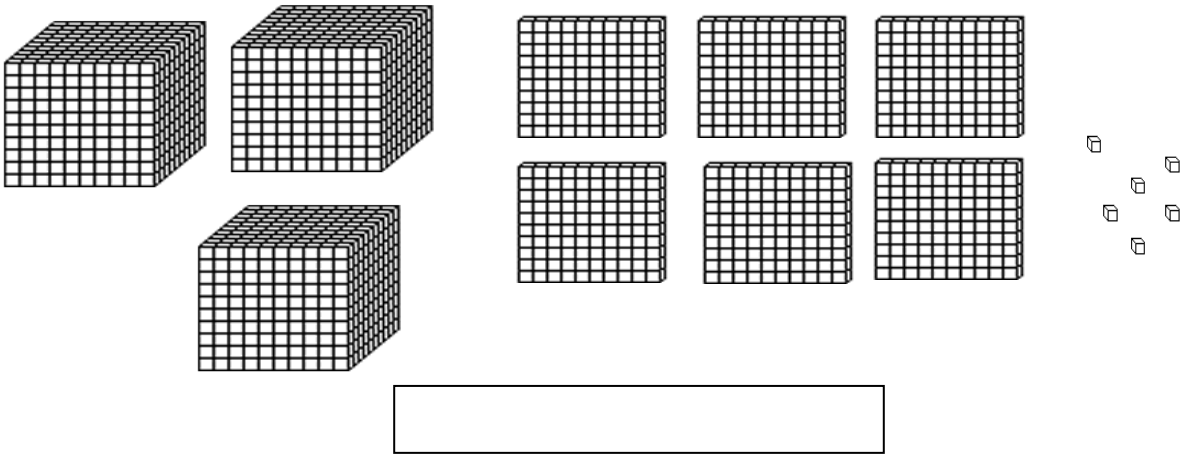


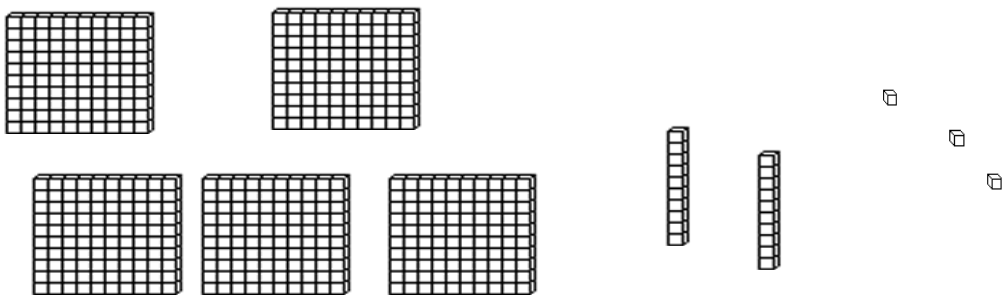


0ne whole	**tenth**	**hundredth**	**thousandth**
1	**0.1 / 1/10**	**0.01**	**0.001 / 1/1000**

1. **Write the decimal represented by the following pictures.**

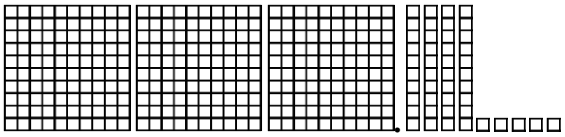






2. Use pictures of base ten blocks or printouts to represent the money below coated in cents as dollars and cents. One is done for you.

   John has 345 cents, how much is this in terms of dollars and cents?



5¢

47¢

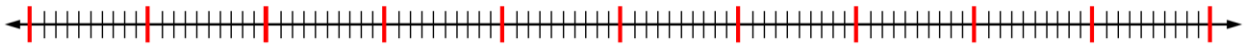
583¢

RESOURCE DOCUMENT #9

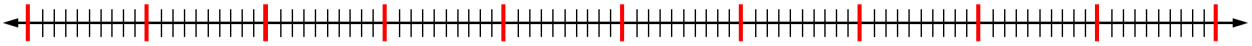
Ordering Decimals Worksheet

1. **Order** the following decimals by indicating their correct position on the number line below.

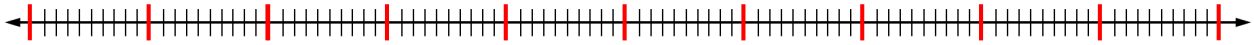
0.5 , 0.2 , 0.7 , 0. 4



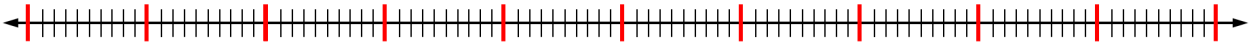
4.98 , 4.89 , 4.32 , 4. 04



20.648 , 20.689 , 20.627 , 20. 603



437.565 , 437.526 , 437.600 , 437.562 , 437.502

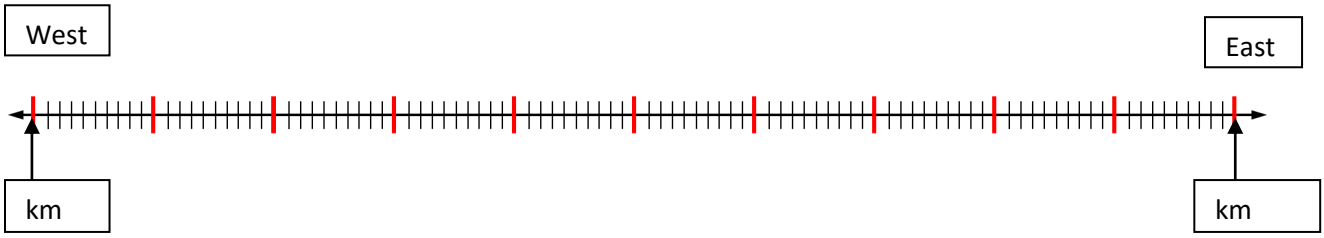


2. Amy is on her way to Ocho Rios from Kingston. She travelled one km on a straight stretch of road. On her way she passed several things and places.

   a. Use the following descriptions to indicate on the number line below where the different places or things are from the starting point. Where the arrows point indicate her starting and ending points.

   - The gas station is ¾ km from where she started.
   - A street light is 0.3km from her ending point
   - A shop is 0.1 km from where she started
   - The hotel is 0.5 km from the street light

- A road sign is half way between her total journey.
- A billboard is 7/10 km to the left of the shop.
- A big palm tree is one tenth kilometres to the left of the hotel.
- She ended at a bus stop 0.2km from the billboard.



Record how many kilometres from the starting point the following places would be.

PLACES OR THINGS	DISTANCE FROM STARTING POINT AS DECIMAL
Bill board	
Shop	
Street light	
Bus stop	
Hotel	
Palm tree	
Road Sign	

b. Determine which direction she is travelling from.

_____

c. If she should travel back to the gas station, describe her journey. Be sure to say how many kilometres she would have to travel, from where she last stopped. (Write your response in terms of a decimal.)

_____

_____

_____

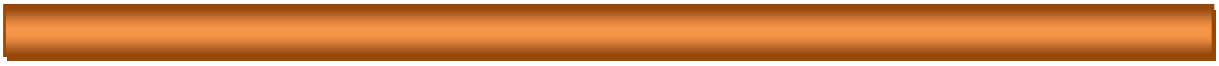
RESOURCE DOCUMENT #10

Addition and Subtraction of Decimals Worksheet

Problem Solving Task

1. Mrs Morris has a photograph she wants to frame. The measurements are shown in the sketch.

2 units



1.5 units

0.5 units

0.36 units

0.45 units

Mrs. Jones has a photograph to be framed. Using the sketch below and the frame pieces, choose the best pieces to construct a frame for the photograph, and state the measurement of the frame.

Indicate the frame pieces which could make the largest/smallest possible frame and round your answer to the nearest tenth or hundredth

a. Work out how much framing Mrs. Morris will need to go around the photograph.

b. What framing sticks should she buy? Give reasons to justify your answer.

c. With the selection made determine the least or greatest amount of framing stick which will be left over.

2. John's house is 25.86 metres high. Peter's house is 15.94 metres high. How much lower is Peter's house than John's house?

John's House

Peter's House

a. If Jack's house is higher than Peter's house and is less than one hundredth of a metre than John's house, what is a possible height for Jack's house?

b. Using the determined height, write your answer to the nearest

   a. Whole number
   b. Nearest tenth of a metre
   c. Nearest hundredth of a metre

3. Usain Bolt and the other three members of the 4x100 m relay team were able to win the race in a time of 38.4s. Using the previous knowledge of Bolt being the fastest man in the world. Write the possible times for each athlete using the following considerations:

Criteria

The anchor leg was the fastest leg.
The second leg had a faster time than the first and third leg
No two legs recorded the same time.

Questions

Using your stated times,

i. Calculate the difference in time between the anchor leg and the first leg.
ii. What is the possible difference in time between the first and the second leg?
iii. The team placed second recorded a time of 40.3 seconds. State the possible times for the four legs using the same criteria outlined above.

Moon Hill

Sunny Beach

Rock City

22km

34.4k

20.8km

16.6km

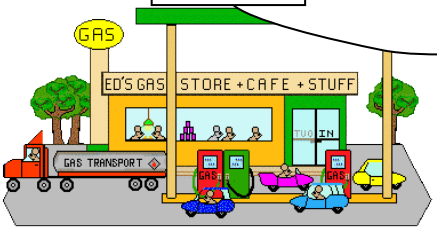
10.1 km

Water Valley
International airport

18.3km

6.8km

37.5km



Water Valley Fire Station

4. Sally and Kevin lives in Rock City. They plan to go to Sunny Beach for a day. How many km would they have travelled if they decide to go in the direction of Moon Hill?

What would be the total distance in kilometers for the:

a. shortest possible route to the beach?

b. the longest route to the beach? and by how much is this route longer than the shortest route?

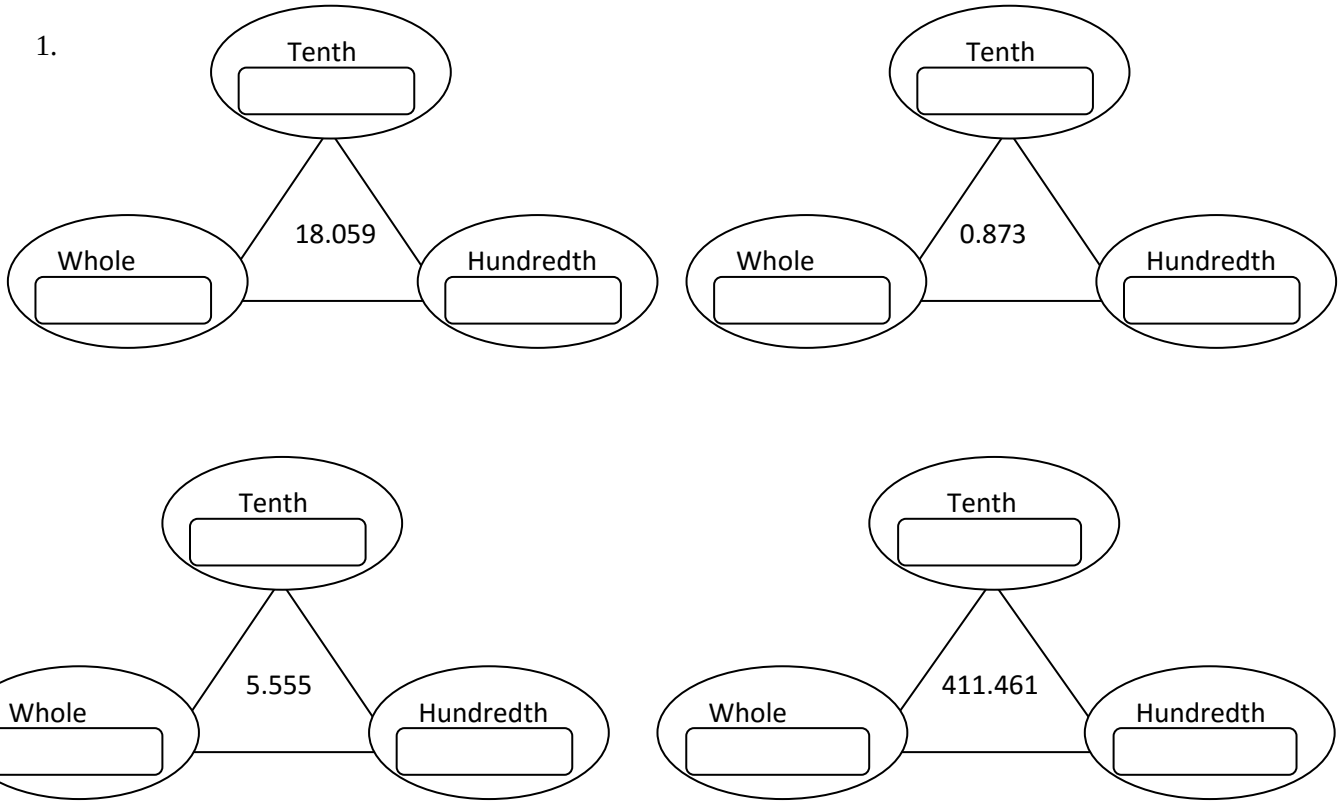
c. if they took one route to the beach and the other home, how far would they have travelled?

RESOURCE DOCUMENT #11

Rounding Decimals Worksheet

Round the decimals in the center of the triangles to the places outlined on its corners.

1.



2. **Guess my number**

I am smaller than a whole. I am a part of the hundredths family. I can be rounded to a number two tenths from zero point seven. Write three numbers that I could be.

_____, _____, _____

3. Josan went on a plaza in town and bought some items. Most of these stores on the plaza use a rounding system where although prices are coated in dollars and cents, if the cents on the price is less than 50¢, your change is rounded down to the nearest dollar. If the cents on the price is 50¢ or more, your change is rounded up to the nearest dollar.

a. Evaluate Josan's shopping day and decide if she ended up spending more or less money.

Store 1

$237.74

Store 2

$549.79

Store3

$999.99

Store 4

$1537.54

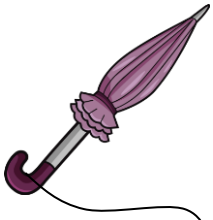
Store 5

$1537.64

Store 6

$937.51

Store 7



$295.04

b. If she lost or gain, how much money would that be?

Rounding Decimal Bingo

Below is a set of bingo cards. Have students cut up the table with the questions. The decimal numbers will be read aloud. Students will be required to round of the numbers to the nearest tenth and use an object to mark the number on their card. They first persons to shout "BINGO!!" after having three marks in a row, column or across diagonals is the winner.

0.2	0.4	0.5
0.9	0.1	0.3
0.7	0.6	0.8

0.3	0.4	0.8
0.5	0.9	0.7
0.1	0.6	0.2

0.3	0.8	0.4
0.2	0.1	0.6
0.9	0.5	0.7

0.2	0.7	0.9
0.6	0.1	0.8
0.5	0.3	0.4

0.4	0.8	0.2
0.1	0.9	0.3
0.6	0.5	0.7

0.3	0.4	0.6
0.5	0.8	0.7
0.4	0.1	0.2

0.5	0.4	0.3
0.8	0.7	0.2
0.1	0.9	0.6

0.1	0.3	0.5
0.7	0.9	0.1
0.2	0.8	0.4

0.8	0.6	0.5
0.4	0.3	0.9
0.7	0.1	0.2

Questions

0.591	**0.072**	**0.783**
0.233	**0.909**	**0.342**
0.488	**0.345**	**0.736**

RESOURCE DOCUMENT #12

Complete the following tables using your calculators. Study the patterns and communicate your findings.

Hundred Thousands	Ten thousands	Thousands	Hundreds	Tens	Ones	Multiply by
			6	8	4	
						10
						100
						1000

Thousands	Hundreds	Tens	ones	Decimal Point	Tenths	hundredths	thousandths	Multiply by
			6	.	4	3	6	
								10
								100
								1000

Resource Document #13

Decimal Magic Square

Fill in the blank in the square so the total is always 18.9 in any direction.

		8.1
5.4	6.3	7.2
	10.8	