

## Concept: Addition and Subtraction of Decimals

**Name:**

Warm-Up:

1. *And the 'Winner' is...*

This game may be played in pairs or a small group.

Materials: A 0-9 spinner or a die

Objective: To create the highest number possible and be able to correctly read it to the group.


Rules: Players take turns rolling spinning the spinner or rolling the die. Each time a number comes up, each player writes it in one space on his/her game board. Once written, the number cannot be moved. *The winner has the **LARGEST** number.*

Write your numbers in the spaces below:


Game 1: \_\_\_\_\_ . \_\_\_\_\_  
*(Answers will vary)*

Game 2: \_\_\_\_\_ . \_\_\_\_\_


### COMPUTER COMPONENT

**Instructions:** In  follow the **Content Menu** path:

**Fractions > Addition and Subtraction of Decimals**

 Work through all Sub Lessons of the following Lessons **in order**:

- *Adding Decimals*
- *Subtracting Decimals*
- *Decimals Around Us*

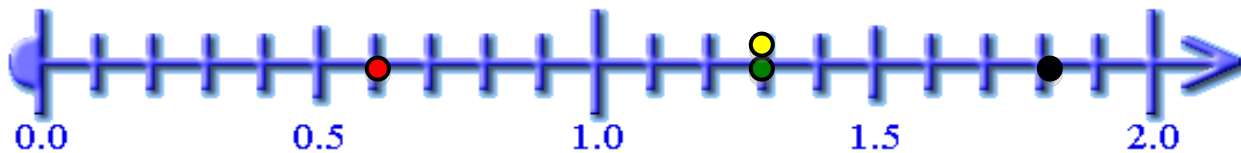
 As you work through the computer exercises, you will be prompted to make notes in your notebook/math journal.

### OFF COMPUTER EXERCISES

1. On the number line, show:

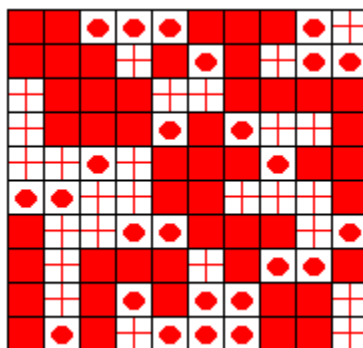
$0.6 + 0.7$ , using red and green dots= **1.3**

$1.3 + 0.5$ , using yellow and black dots= **1.8**



2. A game board is divided into 100 equal sized squares. Each square is 0.01 of the game board.

- (a) 0.49 of the game board is solid.
- (b) 0.25 of the game board has circles.
- (c) 0.26 of the game board has crosses.
- (d) The amount dedicated to circles and solids is 0.74.

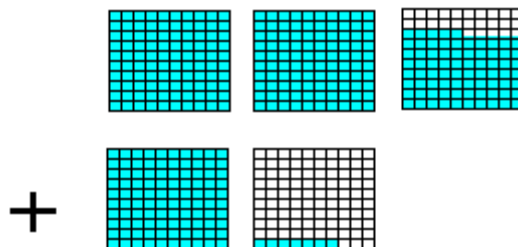


Write this as an addition sentence.

$$0.49 + 0.25 = 0.74$$

3. Add the following using the ‘Partial Sums Method’.

(a)



Add Ones		+		Ones	→	
Add Tenths		+		Tenths	→	
Add Hundredths		+		Hundredths	→	
						3.82

(b) Add 4.59 and 2.36.

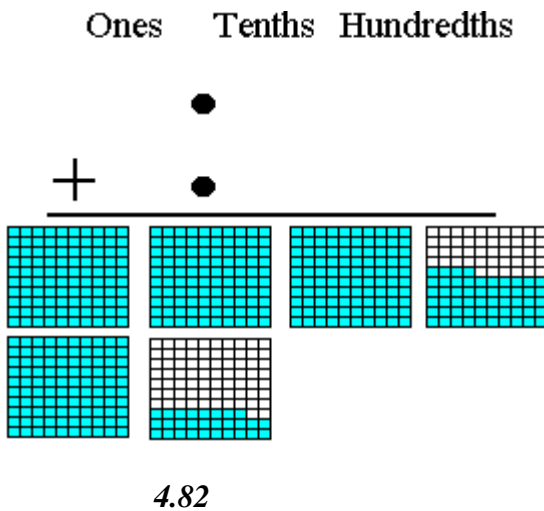
Add Ones		+		→		
Add Tenths		+		→		
Add Hundredths		+		→		+
						<b>6.95</b>

(c) Add 32.5671 and 19.47

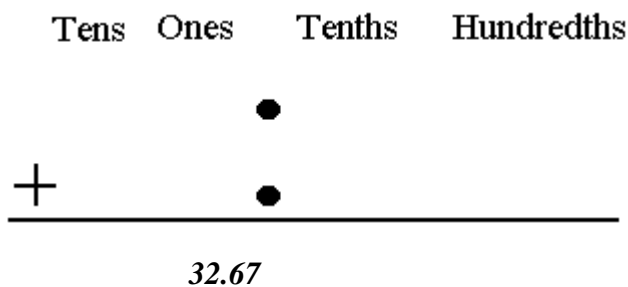
Add Tens		+		→		
Add Ones		+		→		
Add Tenths		+		→		
Add Hundredths		+		→		
Add Thousandths		+		→		+
						<b>52.0371</b>

4. Add the following using the ‘Columns Method’.

(a) Add 3.54 and 1.28 in the chart below. *Adjust the sums so that each number has only one digit.*



(b) Add 25.71 and 6.96 in the chart below. *Adjust the sums so that each number has only one digit.*



(c) Add 38.15 and 14.68 in the chart below. *Adjust the sums so that each number has only one digit.*

Tens	Ones	Tenths	Hundredths
		●	
+		●	
	5	2	83

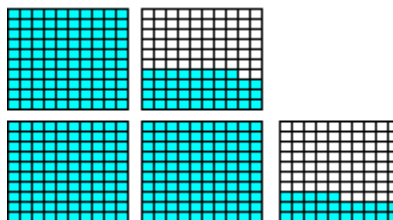
(d) Add 10.95 and 5.9 in the chart below. *Adjust the sums so that each number has only one digit.*

Tens	Ones	Tenths	Hundredths
		●	
+		●	
	1	6	85

5. Add the following using the ‘Right to Left Method’.

(a) Add 1.38 and 2.25 in the chart below. *Add the numbers from right to left in the columns.*

Ones	Tenths	Hundredths
	●	
+	●	
	3	63



(b) Add 42.78 and 23.44 in the chart below. *Add the numbers from right to left in the columns.*

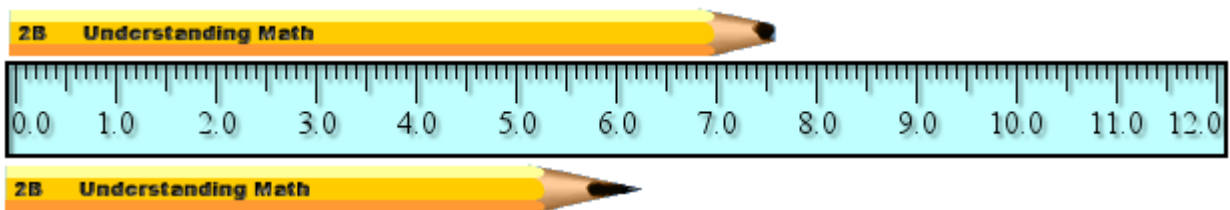
Tens	Ones	Tenths	Hundredths
		●	
+		●	
	6	6	22

(c) Add 58.5 and 21.67 in the chart below. *Add the numbers from right to left in the columns.*

Tens	Ones	Tenths	Hundredths
		●	
+		●	
80.17			

6. Subtract the following decimal tenths.

(a)

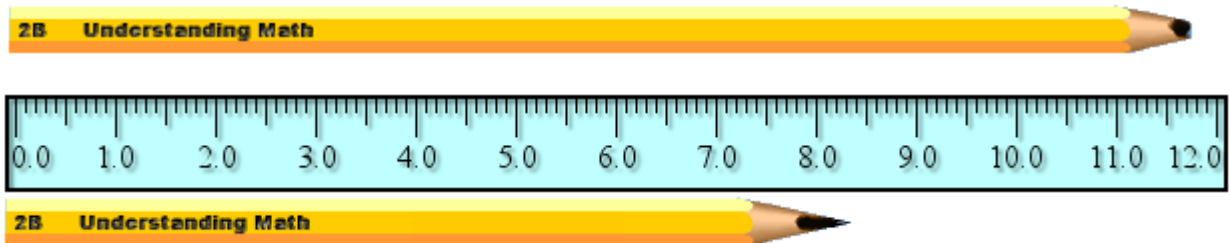


The dull pencil is 7.51 cm long.

The sharpened pencil is 1.31 cm shorter.

$$7.51 - 6.20 = 1.31\text{cm}$$

(b)



The dull pencil is 11.8 cm long.

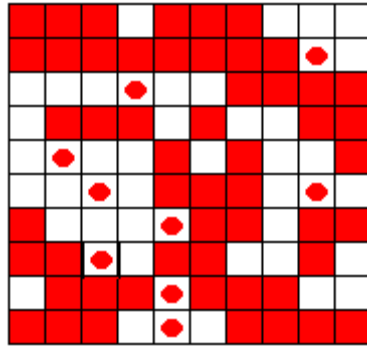
The sharpened pencil is 3.5 cm shorter.

$$11.8\text{ cm} - 8.3\text{ cm} = 3.5\text{ cm}$$

7. Subtract the following decimal hundredths.

This game board is divided into 100 small squares.

Each small square is 0.01 of the whole game board.

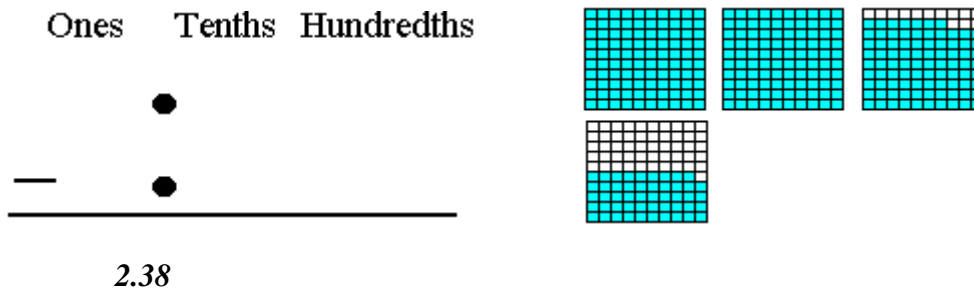


- (a) 53 squares are red. 0.53 of the game board is red.
- (b) 9 squares have circles. 0.09 of the game board has circles.
- (c) 38 of the game board remains white.

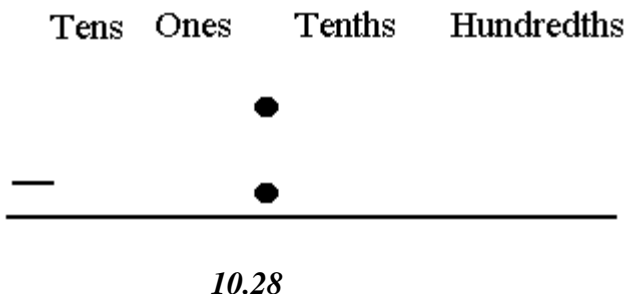
$$100 - 62 = 38$$

8. Subtract the following using the ‘Right to Left Method’.

- (a) Subtract 0.49 from 2.87 in the chart below. *Subtract the numbers from right to left and regroup the numbers where necessary.*



- (b) Subtract 41.98 from 52.26 in the chart below. *Subtract the numbers from right to left and regroup the numbers where necessary.*



(c) Subtract 7.59 from 16.04 in the chart below. *Subtract the numbers from right to left and regroup the numbers where necessary.*

	Tens	Ones	Tenths	Hundredths
—			●	
_____			●	
				8.45

9. Subtract the following using the trade first method.

(a) Subtract 0.89 from 1.36 in the chart below. *Trade numbers where necessary before you begin to subtract.*

	Ones	Tenths	Hundredths	
—		●		
_____		●		
			0.47	

(b) Subtract 7.59 from 16.04 in the chart below. *Trade numbers where necessary before you begin to subtract.*

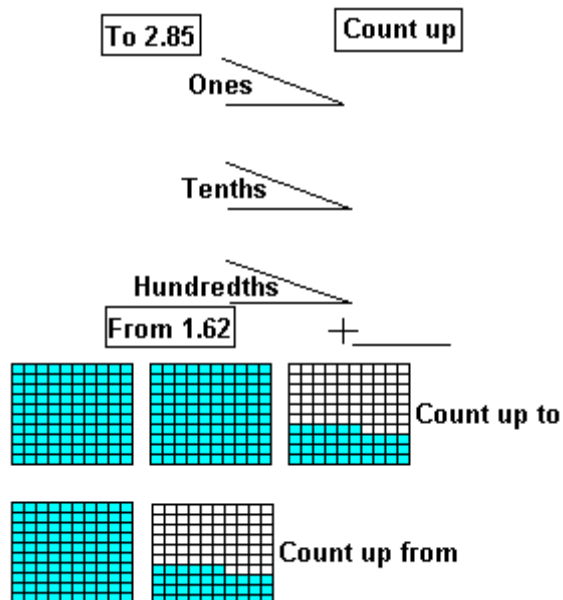
	Tens	Ones	Tenths	Hundredths
—			●	
_____			●	
				8.45

(c) Subtract 51.72 from 88.99 in the chart below. *Trade numbers where necessary before you begin to subtract.*

	Tens	Ones	Tenths	Hundredths
—			●	
_____			●	
				37.27

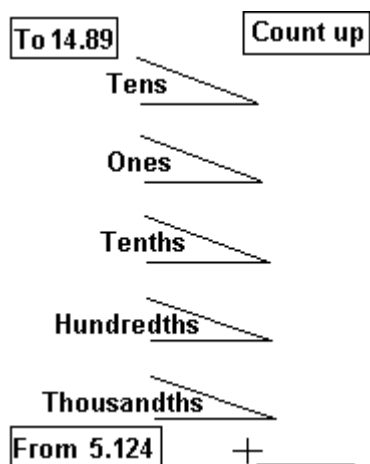
10. Subtract the following using the ‘Add Up Method’.

(a) Count up from 1.62 to 2.85 in the chart below.



$$\begin{array}{r} \text{Therefore, } 2.85 \\ - 1.62 \\ \hline 1.23 \end{array}$$

(b) Count up from 5.124 to 14.89 in the chart below.



$$\begin{array}{r} \text{Therefore, } 14.89 \\ - 5.124 \\ \hline 9.766 \end{array}$$



11. Use a ruler to measure the following objects and record their lengths.



Length of pencil: 10.2 cm



Length of AB: 6.6cm

Length of BC: 4.5cm

Total length from A to C: 8 cm

Perimeter of picture:  $6.6 + 6.6 + 4.5 + 4.5 = \underline{22.2cm}$

12. You have a dull pencil that is 14.5 centimeters long. You sharpen it 3.2 centimeters. *How long is the pencil now?* 11.3 cm

13. You have a mechanical pencil that is 11.3 cm long. After extending the lead, the pencil is 0.9 cm longer. *How long is the pencil with the lead extended?* 12.2 cm

14. You have sharpened a pencil to 6.7 cm in length. The pencil was 12.3 cm long before you sharpened it. *By how much was the pencil shortened?* 5.6 cm

15. Luke bought a bag of marbles for \$7.54. He received \$12.46 in change. *How much money did Luke use for the purchase?* \$20.00

16. Catarina bought a pencil for \$0.31. She paid with \$1.00. *How much change did she receive?* \$0.69

17. William has \$17.87 left after spending \$60.19 on a model airplane. *How much money did William start with?* **\$78.06**
18. Donut Delight spent \$89.53 on dough Tuesday night. They made \$527.64 in donut sales. *How much profit did Donut Delight make on Tuesday night?* **\$438.11**
19. Sasha completed a 100 m breaststroke race in 93.45 seconds. Brian completed the 100 m breaststroke in 104.12 seconds. *How much faster was Sasha's time than Brian's?* **10.67 seconds faster.**
20. Dwight completed a race 7.845 seconds behind Blake, who completed the race in 53.876 seconds. *What was Dwight's time?* **61.721 seconds**
21. Emilie finished the first half of the relay in 87.924 seconds. She then completed the second half in 79.061 seconds. *How long did it take her to complete the entire relay?* **166.985 seconds.**