



## 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:** Select the computer program *Understanding Fractions* (Neufeld)  
Follow the instructions to the Main Menu.  
Select *Addition and Subtraction of Decimals* from the Main Menu.



Work through all sections of this topic **in order**:

- *Adding Decimals*
- *Subtraction Decimals*
- *Decimals Around Us*
- *Practice Questions*



As you work through the computer exercises, make your own notes in your notebook.

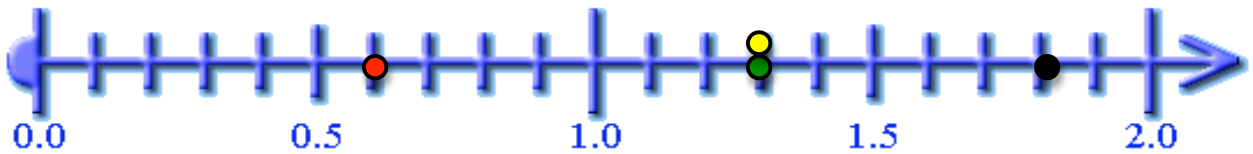
When you reach the end of the section *Practice Questions* on the computer, move on to **OFF COMPUTER EXERCISES** below.

**OFF COMPUTER EXERCISES**

1. On the number line, show:

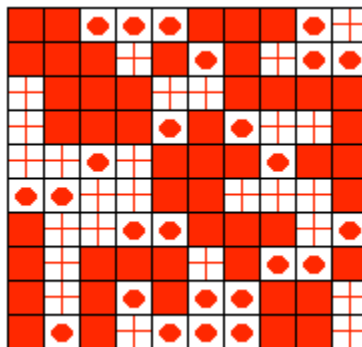
$0.6 + 0.7$ , using red and green dots = 1.3

$1.3 + 0.5$ , 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  $0.74$ .

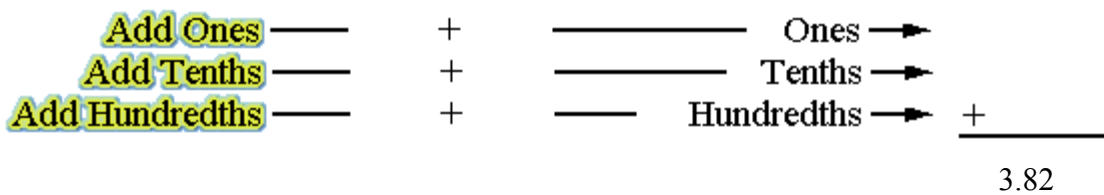
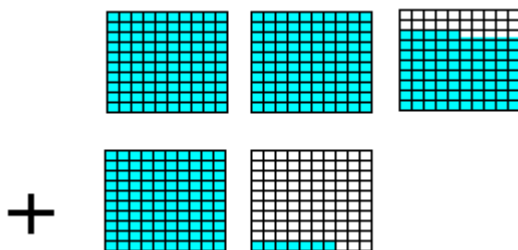


Write this as an addition sentence.

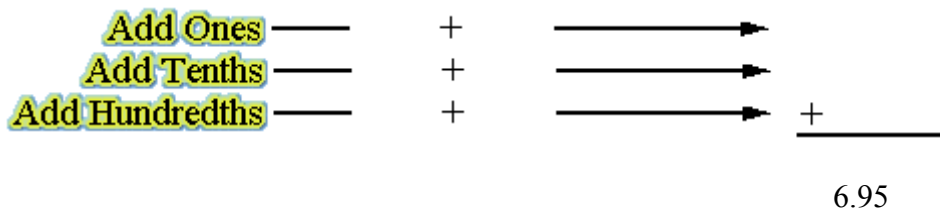
$$\underline{0.49 + 0.25 = 0.74}$$

3. Add the following using the 'Partial Sums Method'.

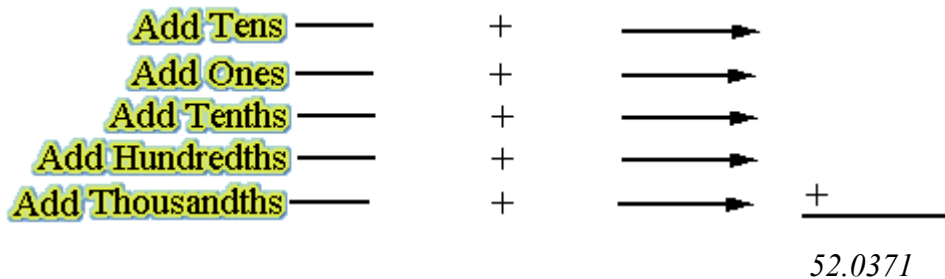
(a)



(b) Add 4.59 and 2.36.

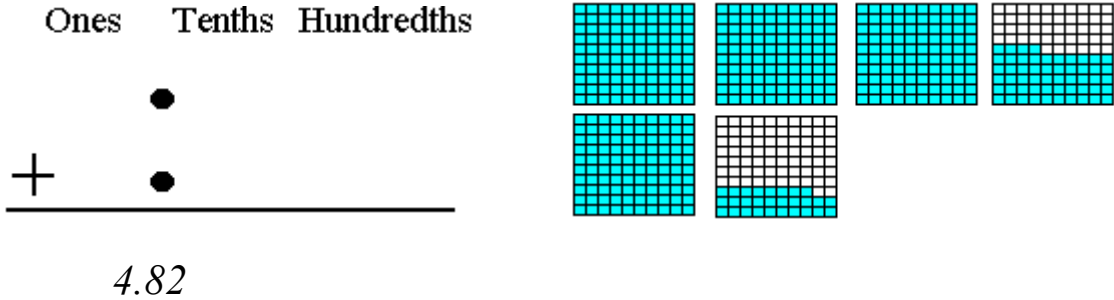


(c) Add 32.5671 and 19.47

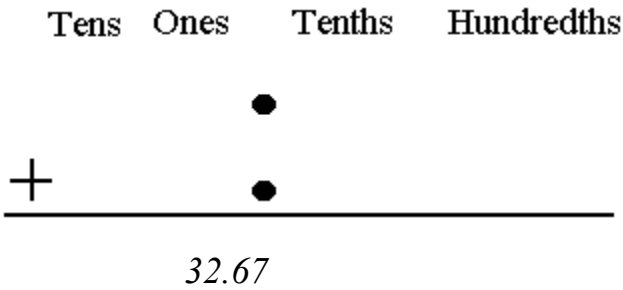


4. Add the following using the 'Columns Method'.

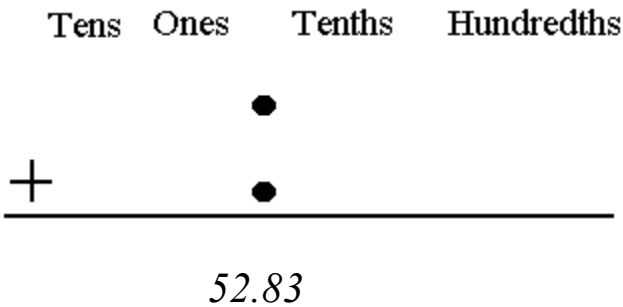
(a) Add 3.54 and 1.28 in the chart below. *Adjust the sums so that each number has only one digit.*



(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.*



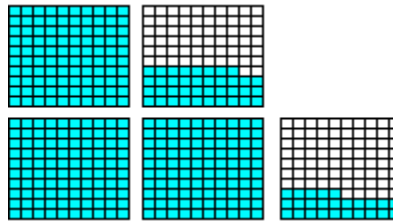
(d) Add 10.95 and 5.9 in the chart below. *Adjust the sums so that each number has only one digit.*

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.*

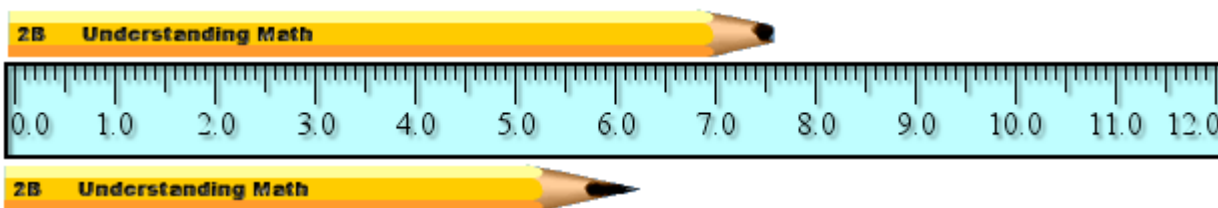
Tens	Ones	Tenths	Hundredths
		●	
+		●	
	6	6	22

(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)

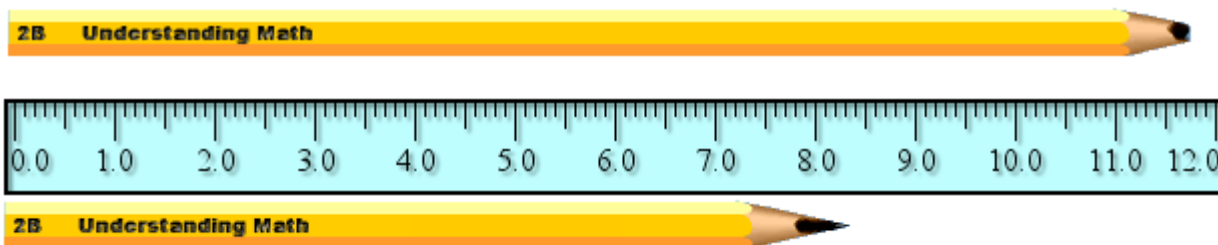


The dull pencil is  $7.51\text{ cm}$  long.

The sharpened pencil is  $1.31\text{ cm}$  shorter.

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

(b)



The dull pencil is  $11.8\text{ cm}$  long.

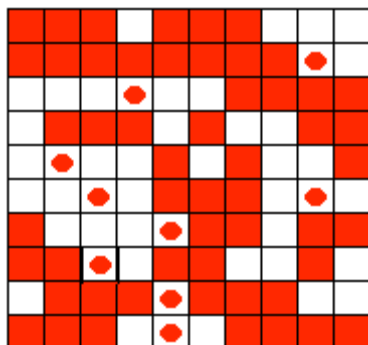
The sharpened pencil is  $3.5\text{ cm}$  shorter.

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

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.

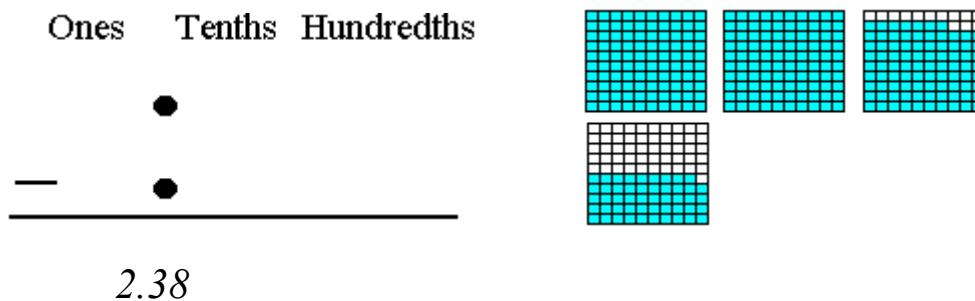


- (a) 53 squares are red.  $0.53$  of the game board is red.
- (b) 9 squares have circles.  $0.09$  of the game board has circles.
- (c) 38 of the game board remains white.

$$100 - 62 = 38$$

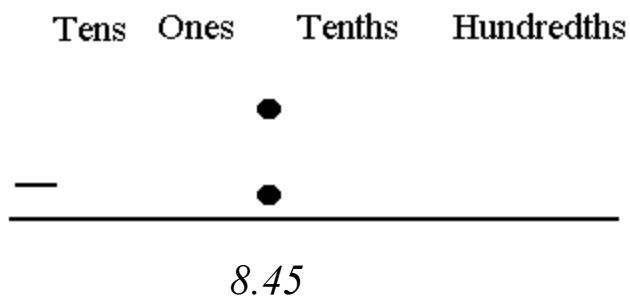
8. Subtract the following using the 'Right to Left Method'.

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

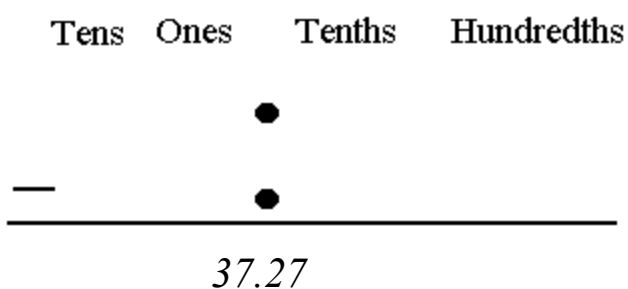




(b) Subtract 7.59 from 16.04 in the chart below. *Trade numbers where necessary before you begin to subtract.*

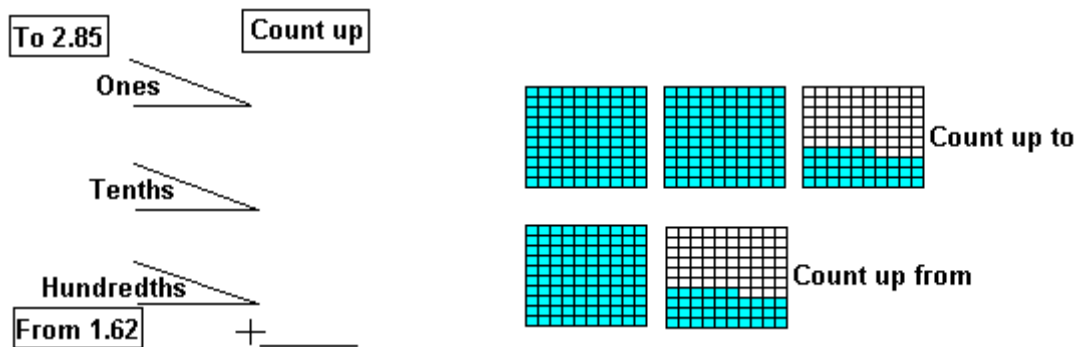


(c) Subtract 51.72 from 88.99 in the chart below. *Trade numbers where necessary before you begin to subtract.*



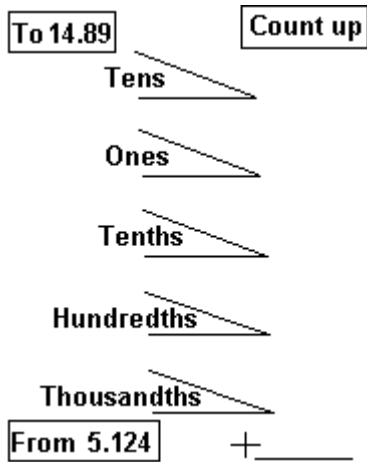
10. Subtract the following using the ‘Add Up Method’.

(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.

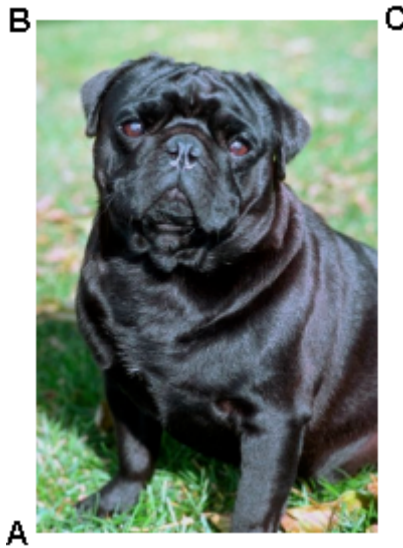


$$\begin{array}{r}
 \text{Therefore, } 14.89 \\
 - 5.124 \\
 \hline
 \underline{9.766}
 \end{array}$$

12. 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:  $6.6 + 6.6 + 4.5 + 4.5 = \underline{22.2cm}$

13. 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

14. 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

15. 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

16. 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

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

18. William has \$17.87 left after spending \$60.19 on a model airplane. *How much money did William start with?* \$78.06

19. 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*

20. 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.*

21. 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*

22. 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.*