Adding and Subtracting Decimals

LO: To be able to add and subtract decimals using the column method.

I bought a new app costing £3.22 and a new phone case which cost £5.71

How much did I spend in total?

I want to add £3.22 and £5.71

$$£3.22$$
$$+ \quad £5.71$$
$$£3.791$$

The *golden* rule:

- Look after your pet decimal point!

- The decimal points MUST be kept in their own box and in their own column so as they can survive!

$$£3.22$$
$$+ £5.71$$
$$£8.93$$

$$£2.52$$
$$+ £4.34$$
$$£6.86$$

$$\begin{array}{r} \text{£}4.18 \\ + \text{£}3.75 \\ \hline \text{£}7.93 \\ {\scriptstyle 1} \end{array}$$

$$\begin{array}{r} £5.26 \\ +\ £4.49 \\ \hline £9.75 \\ {\scriptstyle 1} \end{array}$$

$$\begin{array}{r} £2.89 \\ +\ £1.58 \\ \hline £4.47 \\ {\scriptstyle 1\quad 1} \end{array}$$

This technique doesn't just work for money. It works for any decimal addition as long as you keep the decimal points in their own column.

$$\begin{array}{r} 3.57 \\ +\,5.49 \\ \hline 9.06 \\ {\scriptstyle 1\ \ 1} \end{array}$$

$$2.70$$

Sometimes it helps to introduce a place holder zero, so that each number has the same number of DECIMAL PLACES.

$$+\ 5.46$$

$$8.16$$

1

$$5.59$$
$$+\ 3.50$$
$$\overline{9.09}$$
$$1$$

This place holder zero can only ever be put on the very beginning or the very end.

The *golden* rule:

- The decimal points MUST be kept in their own box and in their own column so as they can survive!

- Where necessary, add place holder zeros to help.

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Work out the following without a calculator:

(a)
$$\begin{array}{r} {}^{4}\cancel{5}\,{}^{15}\cancel{6}\,{}^{1}3 \\ -\ 2\ 8\ 5 \\ \hline \mathbf{2\ 7\ 8} \\ \hline \end{array}$$

(b)
$$\begin{array}{r} {}^{6}\cancel{7}\,{}^{9}\cancel{0}\,{}^{1}4 \\ -\ 4\ 3\ 9 \\ \hline \mathbf{2\ 6\ 5} \\ \hline \end{array}$$

(c) 13.7 – 4.56
$$\begin{array}{r} {}^{0}\cancel{1}\,{}^{1}3\,.\,{}^{6}\cancel{7}\,{}^{1}0 \\ -\ 0\ 4\,.\,5\ 6 \\ \hline \mathbf{0\ 9\,.\,1\ 4} \\ \hline \end{array}$$

(d) 9 – 2.475
$$\begin{array}{r} {}^{8}\cancel{9}\,.\,{}^{9}\cancel{\,{}^{1}0}\,{}^{9}\cancel{\,{}^{1}0}\,{}^{1}0 \\ -\ 2\,.\,4\ 7\ 5 \\ \hline \mathbf{6\,.\,5\ 2\ 5} \\ \hline \end{array}$$

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Complete the questions on the attached sheet **in your homework book.**

Please show all your workings out.