Multiplying Decimals

Math- Ms.Harrietha

When multiplying decimals it is useful to think about it as whole numbers first.

For example:

 9x7 = 63

Therefore 9 x 0.7 (7 tenths)= 6.3 or 63 tenths

When multiplying a whole number by a number less than 1 (a whole) the answer will always be less than the larger factor.

Why do you think this is the case?

Thinking about multiplication of decimals

a) When multiplying by the decimal 0.8 the answer will be almost that amount but not quite

b) 2.4 multiplied by an amount will be double the amount with almost another half of it added on.
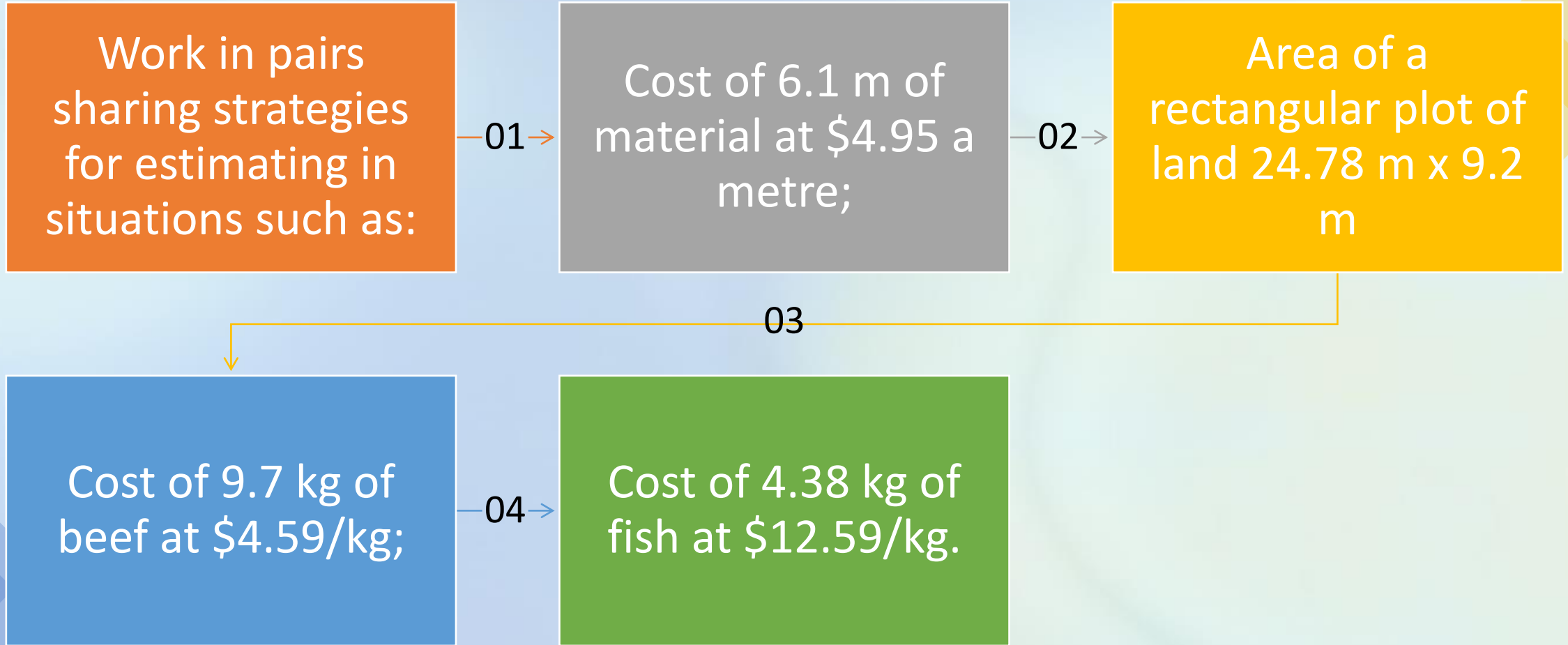
- Use your calculator to solve and see:
- 2 x 0.8 =
- 3 x 2.4=

Exit Slip

Describe how to calculate 3 x 1.25 by thinking of it as money.

Using Estimation

Work in pairs sharing strategies for estimating in situations such as:

01 →

Cost of 6.1 m of material at $4.95 a metre;

02 →

Area of a rectangular plot of land 24.78 m x 9.2 m

03

Cost of 9.7 kg of beef at $4.59/kg;

04 →

Cost of 4.38 kg of fish at $12.59/kg.

There are several strategies you can choose from when multiplying decimals.

Estimate first; remove the decimals and multiply as you would whole numbers then put the decimal back into the answer using your estimate to help.

Box method; estimate first and multiply as you would whole numbers using the box method and use your estimate to place the decimal in the answer.

Counting decimal places; estimate first and multiply as you would whole numbers. Count the number of decimal places in the factors and start at the right and count back that number of places to place the decimal in the answer.
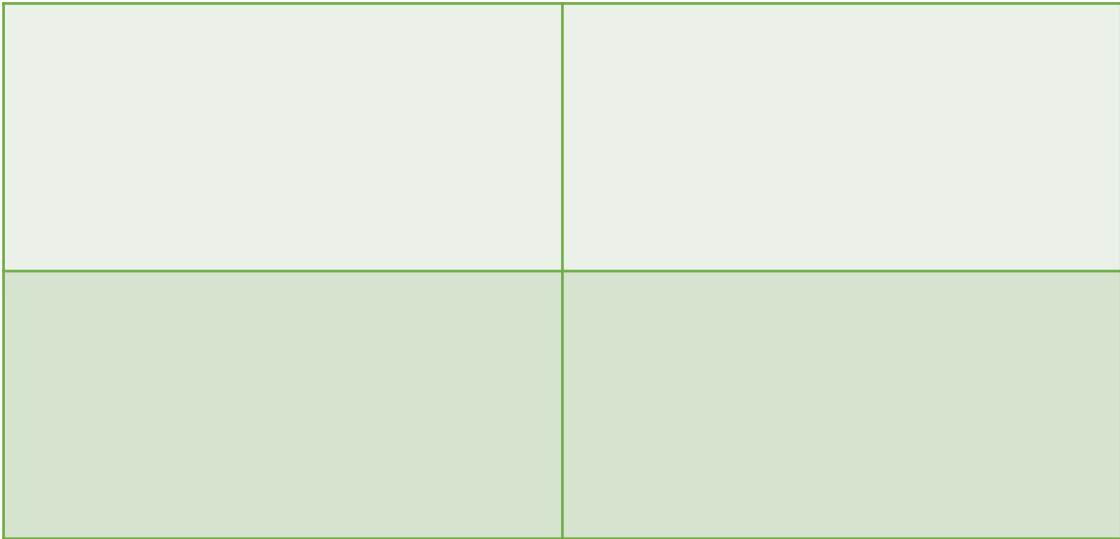
Strategy 1- Using the traditional method

2.4 x 1.4   Estimate:

24

X 14
_____

Strategy 2- Box Method

2.4 x 1.4   Estimate:

Strategy 3- Counting Decimal Places

2.4 x 1.4   Estimate:

$$\begin{array}{r} 24 \\ \times\ 14 \\ \hline \end{array}$$

Practice using your method of choice

3.2 x 2.7

2.1 x 0.8

6.2 x 5.7

0.5 x 2.2