Measurement (mass)

HERE’S THE MATHS

Your child is learning to calculate and convert between standard units of mass:   
1 tonne (t) = 1000 kg; 1 kg = 1000 g) to solve problems, using decimal notation   
up to three decimal places: 100 g = 0·1 kg, 10 g = 0·01 kg, 1 g = 0·001 kg.

ACTIVITY

You will need:

* 1­–9 digit cards from a pack of playing cards
* pencil, paper and rubber
* coin

**What to do**

* The first person turns over cards to make the mass of two different shopping bags   
  in kilograms with three decimal places.
* Round each mass to the nearest 100 g and find the total.
* The second person has a turn.
* Toss the coin to score: heads means the person with the bag with the greater mass scores a point, and, tails, the person with the smaller mass.
* The winner is the first person to score 5 points.

Variation

* Instead of rounding the mass, each person keeps a running total of the exact mass   
  of their bags and the first person to reach 20 kg is the winner.

QUESTIONS TO ASK

What is 6378 g   
in kilograms?

What is 7500 kg in tonnes?

What is 1 g in kilograms?

Can you convert

1·009 tonnes to kilograms?

Can you convert

0·075 kg to grams?

Primary 7

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Maths   
Newsletter 6

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

MATHS TOPICS

These are the maths topics your child will be working on during the next three weeks:

* Multiplication and division, including decimals
* Measurement (mass)

KEY MATHEMATICAL IDEAS

During these three weeks your child will be learning to:

* multiply multi-digit numbers (up to ThHTO) by a 2-digit number using an appropriate method, including the formal written method of long multiplication
* use mental methods to multiply decimals to tenths or to hundredths by   
  whole numbers
* calculate and convert between standard units of mass to solve problems,   
  using decimal notation up to three decimal places.

TIPS FOR GOOD HOMEWORK HABITS

Take a break before your child gets bored or overwhelmed.

Multiplication and division

HERE’S THE MATHS

Your child is learning to multiply multi-digit numbers (up to ThHTO) by a 2-digit number using an appropriate method, including the formal written method of long multiplication. The importance of estimation the answer continues to be emphasised.

ACTIVITY

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Grid method  457 x 36 400 50 7   |  |  |  |  | | --- | --- | --- | --- | | 30 | 12 000 | 1500 | 210 | | 6 | 2400 | 300 | 42 |   13 710 + 2742 = 16 452 | Formal written method  4 5 7  × 3 6  1 31 72 1 0  2 73 44 2  1 6 4 5 2  1 |

What to do

You will need:

* 1–9 cards
* One person chooses three cards to make a 3-digit number and two cards for a 2-digit number.
* Write out the multiplication carefully and execute it as show in the example above.
* Second person checks the answer with calculator.
* Change roles and repeat.
* Score 1 point for each odd number in the answer and 2 points for each even number in the answer.
* Continue for 10 minutes.
* The winner is the person with the higher score.

Variation

* Choose four cards to make a 4-digit number and multiply by TO as before.

QUESTIONS TO ASK

How can you calculate  
39 × 25 mentally? (*4 × 25 = 100 so 39 × 25 = 975*)

Estimate 326 × 69. (*300 × 70 = 21 000*)

In a HTO × TO calculation, when you multiply by the tens figure, why do you put a 0 in the ones column? (*Because you are multiplying by a multiple of ten, not a single digit.*)

Multiplication and division

What is the ones digit in the answer to 489 × 67? (*3, because 9 × 7 = 63*)

HERE’S THE MATHS

Your child is practising the multiplication of decimals to tenths or to hundredths by whole numbers, using an appropriate method, including the formal written method. They may choose a mental method, the grid method, partitioning, the expanded written method or the formal written method.

ACTIVITY

|  |  |  |
| --- | --- | --- |
| What is 65·38 × 6?  Estimate 70 × 6 = 420 | **6 5 3 8**  **× 6**  **3 9 2 2 8**  **3 2 4** | 65·38 × 6 is equivalent to  6538 × 6 ÷ 100.  This equals 39 228 ÷ 100 which is 392.28  **65·38 × 6 = 392·28** |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1  6.37 | 2  17.62 | 3  23.78 | 4  30.29 | 5  41.06 | 6  8.42 | 7  13.94 | 8  27.47 | 9  36.59 |

What to do

* Shuffle the cards and turn one over to choose the calculation.

You will need:

* 1–9 digit cards from a pack of playing cards
* calculator (or use mobile phone)
* Turn a second card over to decide what to multiply by.   
  (If 1 is selected, turn another card).
* Both complete the calculation.
* Compare strategies.
* Continue for 10 minutes.

Variation

* Take turns to complete calculations and award a point to the person with the higher score.

QUESTIONS TO ASK

Can you estimate the answer to 4.6 × 7? (*35*)

What is 0.07 × 6 (*0.42*)

What is 0.8 × 3? (*2.4*)

What is the cost of 4 boxes of biscuits costing £1.59 a box? (*£6.36*)

Can you estimate the answer to £7.07 × 7? (*£49*)