Week 5, Day 1
Short multiplication

Each day covers one maths topic. It should take you about 1 hour or just a little more.

1. Start by reading through the Learning Reminders. They come from our PowerPoint slides.

2. Tackle the questions on the Practice Sheet. There might be a choice of either Mild (easier) or Hot (harder)! Check the answers.

3. Finding it tricky? That’s OK... have a go with a grown-up at A Bit Stuck?

4. Think you’ve cracked it? Whizzed through the Practice Sheets? Have a go at the Investigation...
Use short multiplication to multiply 4-digit numbers by 1-digit numbers.

2341  5372  4278  6143

Target 20,000

Decide which 4-digit number to multiply by a number card.
You are aiming for an answer as close to 20,000 as possible. You can use short multiplication or the grid method....

How close to 20,000 were you?

How did you decide which 4-digit number to use?
Did rounding help?
Learning Reminders

Use short multiplication to multiply 4-digit numbers by 1-digit numbers.

2341 \times 8 = 18728

\[
\begin{array}{cccc}
2341 & 5372 & 4278 & 6143 \\
\times & 8 & & \\
\hline
8 & 16000 & 2400 & 320 & 1 \\
23 & & & \\
18728 & & & \\
\end{array}
\]
Learning Reminders

Use short multiplication to multiply 4-digit amounts of money by single-digit numbers; Use rounding to approximate.

Roughly how much would it cost to buy 3 of these? Round to the nearest pound to estimate the cost.

Sony MDR-ZX100 Outdoor Headband Headphones - Black by Sony (25 Mar 2011)
£23.67

3 x £23.67

\[
\begin{array}{c|c|c|c|c}
\times & £20 & £3 & 60p & 7p \\
3 & £60 & £9 & £1.80 & 21p \\
\end{array}
\]

\[
\begin{array}{c|c|c|c|c|c|c|c}
\times & 1 & 2 & 2 & 1 & 0 & 0 & 1 \\
3 & \_ & \_ & \_ & \_ & \_ & \_ & \_ \\
\end{array}
\]

Add the pounds, and then the pence.

3 x 60p = £1.80

3 x 60p + 20p = £2
Practice Sheet Mild
Money multiplication practice

Use a written method to calculate the answers, but watch out for a few where you could use a mental method instead.

1. $3 \times £5.28$
2. $5 \times £2.99$
3. $4 \times £5.79$
4. $4 \times £4.16$
5. $3 \times £2.63$
6. $8 \times £4.43$
7. $7 \times £5.87$
8. $3 \times £25.01$
9. $6 \times £46.14$
10. $4 \times £25.42$
11. $8 \times £63.54$
12. $5 \times £32.45$
13. $4 \times £11.11$
14. $8 \times £52.69$
15. $7 \times £86.74$

Challenge
Which will have a larger total? £34.34 x 4 or £43.43 x 3
Can you say before you work them out to check?
Were you correct?
Choose a number from 3 to 9.

Choose one of these prices to multiply by your chosen single-digit number.

£45.19  £26.47  £53.28  £42.75

You are aiming for an answer as close to £200 as possible!

Repeat, with a different single-digit number each time.

Which answer was closest to £200?
Practice Sheet Answers

Money multiplication practice (mild)

1. $3 \times £5.28 = £15.84$
2. $5 \times £2.99 = £14.95$
3. $4 \times £5.79 = £23.16$
4. $4 \times £4.16 = £16.64$
5. $3 \times £2.63 = £7.89$
6. $8 \times £4.43 = £35.44$
7. $7 \times £5.87 = £41.09$
8. $3 \times £25.01 = £75.03$
9. $6 \times £46.14 = £276.84$
10. $4 \times £25.42 = £101.68$
11. $8 \times £63.54 = £508.32$
12. $5 \times £32.45 = £162.25$
13. $4 \times £11.11 = £44.44$
14. $8 \times £52.69 = £421.52$
15. $7 \times £86.74 = £607.18$

Challenge

$4 \times £34.34 = £137.36$ and $3 \times £43.43 = £130.29$ so the first is larger.

Multiplying amounts of money (hot)

e.g. $8 \times £26.47 = £211.76$
Can you get an answer closer to £200?
**Work in pairs, but record your work on your own sheet**

**Things you will need:**
- 100s, 10s and 1s place value cards
- A pencil

**What to do:**
- Spread out the 100, 200, 300, 400, 500 and 600 cards.
  - Spread out the 10, 20, 30, 40, 50 and 60 cards. Spread out the 1, 2, 3, 4, 5 and 6 cards.
- Choose one card from each group to make a 3-digit number.
- Use the grid method to multiply this by any number you choose from 2 to 9.
  - You are aiming to get an answer near 2000.
- Repeat.
- How close to 2000 can you get?

**S-t-r-e-t-c-h:**
Use the grid method to work out 5 x 2346 and 4 x 4271.

**Learning outcomes:**
- I can use the grid method to multiply 3-digit numbers by 1-digit numbers.
- I am beginning to estimate the answers.
- I am beginning to multiply 4-digit numbers by 1-digit numbers.
Investigation
Aim for 60,000

• Use the digits 5, 6, 7, 8 and 9 to create 4-digit by 1-digit multiplications.

0000 x 0

• Aim for an answer as close to 60,000 as possible.

What will be your strategy to get started?

How will you keep track of combinations of digits you’ve tried?

5 6 7 8 9
7965 x 8

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