

LO: To multiply a four digit number by 2 digits

Skills Drills

1. What are the common factors of 24 and 18?
2. What are the first three prime numbers?
3. What is the **difference** between 3^2 and 9^2 ?
4. Draw a factor tree for 72
5. Show me two different methods for **quickly** solving $125 \times 19 =$
6. How could we solve 26×11 ?
7. $-17 + 23 =$
8. $24 - 29 =$
9. Find the difference between -22 and 17

There are 346 smarties in a jar.
How many smarties will there be in
21 jars?



Draw a bar model to represent this problem and estimate
the answer. Don't calculate!

Now calculate the answer in your
skills drills book:

A large yellow rounded rectangle with a black border. Inside the rectangle, there are two horizontal blue lines, one near the top and one near the bottom, providing space for a student to draw a bar model or write an answer.

Where has Mr Newsam gone wrong?

With a partner, mark the following questions using a calculator.
For the incorrect answers, rewrite the correct answers
highlighting the mistakes he made.

$$\begin{array}{r} 1. \quad 1475 \\ \times 649 \\ \hline 13275 \\ 1475 \\ \hline 14750 \\ 11 \end{array}$$

$$\begin{array}{r} 2. \quad 3597 \\ \times 1223 \\ \hline 10771 \\ 71940 \\ \hline 82731 \\ 11 \end{array}$$

$$\begin{array}{r} 3. \quad 6972 \\ \times 335 \\ \hline 34860 \\ 209160 \\ \hline 243920 \\ 11 \end{array}$$

What were the mistakes on each question?

How can we avoid them?

$$\begin{array}{r} 1. \quad 1475 \\ \times 649 \\ \hline 13275 \\ 14750 \\ \hline 147500 \\ \hline \end{array}$$

$$\begin{array}{r} 1475 \\ \times 469 \\ \hline 13275 \\ 14750 \\ \hline 28025 \end{array}$$

$$\begin{array}{r} 2. \quad 3597 \\ \times 1223 \\ \hline 10771 \\ 71940 \\ \hline 82731 \end{array}$$

$$\begin{array}{r} 3597 \\ \times 223 \\ \hline 10791 \\ 71940 \\ \hline 82731 \end{array}$$

3. 6972
 $\times 4335$

 34860
 209160

 243920

$$\begin{array}{r} 6972 \\ \times 4335 \\ \hline 34860 \\ 209160 \\ \hline 244020 \end{array}$$

Choose two numbers to find the product of

47

4671

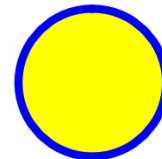
673

E.g.
 4671×63

63

238

78



Use the grid method to check your calculation then mark with a calculator.

(Hint: Use two digits as the multiplier)

Challenge: Explain using examples. What is the same/ different about multiplying by 2 digits or 3 digits?

Extension Questions

Missing digits

$$\begin{array}{r} 25\square \\ \times \square 7 \\ \hline 1771 \\ 7590 \\ \hline 9361 \end{array}$$

Missing digits

$$\begin{array}{r} \square 15 \\ \times 6\square \\ \hline 3260 \\ 48900 \\ \hline 52160 \end{array}$$

LO: To multiply a four digit number by 2 digits

Skills Drills

1. Round the following numbers to the nearest 100:

25,600

170,000

300

25557

169978

256.78

2. $18989 = 78876 - 59,887$

3. $70 \times 50 = 3500$ 35×100

4. $29587 + \quad = 41000$

5. $26 \times 568 =$ (Don't use column multiplication)

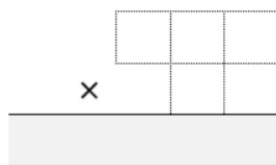
6. $1.971 + \quad = 2$

7. $3.809 + \quad = 5$

8. What's the highest common factor of 24 and 48?

Task

Each of you draw a multiplication grid like this:



Throw the dice five times each until all the cells are full.

Whoever has the product closest to 10000 wins.

There are two possible scoring systems:

- A point for a win. The first person to reach 10 wins the game.
- Each player keeps a running total of their "penalty points", the difference between their result and 10000 after each round. First to 10000 loses.

Extension

Now play the game again. This time with decimals. You need to replace one of the squares with a decimal point. You then need to throw the dice four times. How close can you get to 1,000?

LO: To multiply numbers by 2 digit decimals

Skills Drills

1. Round the following numbers to the nearest whole number:

3.7 4.05 5.56 102.13

2. $34437 = 57896 - \boxed{}$

3. $42 \times 100 = \boxed{} \times 50$

4. $37697 + \boxed{} = 59000$

5. Solve effectively: $24 \times 99 =$

6. Solve two ways: $101 \times 298 =$

7. Find the greatest prime factor of 49

8. List all the prime numbers to 30.

What is the same/ different?

$$\begin{array}{r} 379 \\ \times 24 \\ \hline 1516 \\ 7580 \\ \hline 9096 \end{array}$$

4×379
 20×379

$$\begin{array}{r} 379 \\ 37.9 \\ 3.79 \end{array}$$
$$\begin{array}{r} 3.79 \\ \times 24 \\ \hline 15.16 \\ 75.80 \\ \hline 90.96 \end{array}$$

Remind Me: What do we need to be careful with when working with money?

Investigation:

Mr Newsam has just turned 31. He is planning a party to celebrate. He has a budget of £1000. Choose from the list of party food and drink below to provide a good selection for the party.

Use the concise method of multiplication to choose a variety of food and drink.

Challenge- How close to £1000 exactly can you get without going over?

- 1.5 litre bottle of Coca Cola £1.49
- 1.5 litre bottle of Fanta £1.29
- Pack of party rings £1.19
- Multi pack of Hula Hoops £2.71
- Multi pack of Skips £2.83
- Multi pack of Kit Kats £2.36
- Sainsbury's sandwich selection £18.43
- Sainsbury's sausage rolls £2.79



Extension 1

There are 26 students in a class.

They get 7 pieces of homework per week.

There are 38 weeks in each school year.

How many pieces do they get in a school year?



Extension 2

Here are five number cards.



Choose four of the cards to make the calculation correct.

$$\square\square \times \square\square = 4108$$