



GRADE 5 · NUMBER & OPERATIONS IN BASE TEN · PRACTICE

MULTIPLYING MULTI-DIGIT NUMBERS

Today's goal: I can fluently multiply multi-digit whole numbers using the standard algorithm.

Pick your peppers!

Everyone does Mild & Medium. Then climb as high as you can.



Mild

Tan the Turtle



Medium

Digit the Fox



Spicy

Blaze the Dragon



Extra Spicy

Pi the Owl

WATCH MR DJ SOLVE

Estimate, then work out 208×45 .

- 1 Estimate: $200 \times 45 = 9000$.
- 2 $208 \times 5 = 1040$.
- 3 $208 \times 40 = 8320$.
- 4 $1040 + 8320 = 9360$.

Answer: estimate about $200 \times 45 = 9000$; answer 9360



REMEMBER

One partial product per digit, each carrying its own place. Multiply, then add the carry. Estimate first, so a wrong answer shows up as the wrong size.



MILD

Tan the Turtle: Slow and steady. Warm up!

- 1 Estimate, then work out 47×23 .

Answer: _____

- 2 Estimate, then work out 125×34 .

Answer



OOPS ALERT

Careful on #1! Blaze spotted the slip Mr DJ sees most: Answered 235 — the second partial left as 94. Against the estimate this is less than a quarter of the expected size.



MEDIUM

Digit the Fox: Stretch your brain.

- 3 Work out 47×3 , writing each step. Where exactly does the carried 2 get used?

Answer

- 4 Without multiplying it out, say roughly how big 682×39 is, and explain how you decided.

Answer



SPICY

Blaze the Dragon: Bring the heat!

- 5 Mo works out 47×3 as 181. He did $7 \times 3 = 21$, wrote the 1, carried the 2, then worked out $(4 + 2) \times 3$. What did he do in the wrong order?

Answer

- 6 A child answers $38 \times 46 = 380$. Show that this must be wrong using only an estimate.

Answer

- 7 For 306×24 , explain what the 0 in 306 does and does not do.

Answer



EXTRA SPICY

Pi the Owl: Big-brain challenge.

8 Why is the shift in the second line arithmetic rather than just a way of setting the sum out?

Answer



How did this sheet feel?



Easy for me



Just right



Made me think

Stuck? Watch Mr DJ explain it

"2-3 Digit Multiplication Step by Step (Fast Method)" on
YouTube: [youtube.com/@MathWithMrDJ](https://www.youtube.com/@MathWithMrDJ)

Brain break: daily puzzles

Three new math puzzles every day, free:
puzzles.mathwithmrdj.com