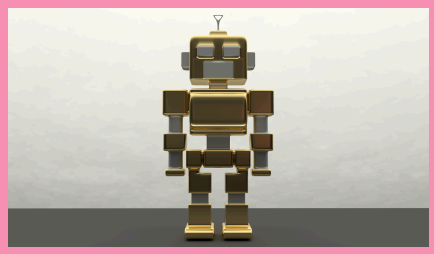
Name & Surname: _____ Class: _____ Date: _____

Big Multiplication Mission

Multiply multi-digit numbers with confidence

About 45 minutes Level ★★★☆☆



Multiply Step by Step

The **standard algorithm** is a fast way to multiply **multi-digit** numbers.

- Multiply the **ones** first. Regroup if the product is 10 or more.
- Multiply the **tens** next. If the factor has 2 digits, write 0 as a placeholder, then multiply by the tens.
- **Estimate** by rounding to check: 28 × 31 is about 30 × 30 = 900.

Task A

/2

Follow the standard steps for each product.

WORKED EXAMPLE

Work out 324 × 6

1. Multiply ones: 4 × 6 = 24. Write 4, regroup 2 tens.
2. Multiply tens: 2 × 6 = 12, plus 2 = 14. Write 4, regroup 1 hundred.
3. Multiply hundreds: 3 × 6 = 18, plus 1 = 19. Answer is 1,944.

Answer: 1944

YOUR TURN

Work out 435 × 3

Answer: _____

WORKED EXAMPLE

Work out 23 × 14

1. Multiply by ones: 23 × 4 = 92.
2. Multiply by tens: 23 × 10 = 230. Write 0 as placeholder.
3. Add the parts: 92 + 230 = 322.

Answer: 322

YOUR TURN

Work out 32 × 25

Answer: _____

Key words

factor: a number you multiply

product: the answer to a multiplication

regroup: exchange 10 ones for 1 ten

estimate: a close guess found by rounding

placeholder: a zero that holds a place value

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Quick Fluency Practice

Get fluent with quick multi-digit multiplications.

Task B

/10

Use the standard algorithm. Estimate first to check.

WARM UP

1. Find the **product**: 34 × 6

   Answer: _____

2. Find the **product**: 57 × 8

   Answer: _____

3. Find the **product**: 213 × 3

   Answer: _____

4. Find the **product**: 1,426 × 2

   Answer: _____

PRACTICE

5. Find the **product**: 36 × 12

   Answer: _____

6. Find the **product**: 48 × 35

   Answer: _____

7. Find the **product**: 214 × 23

   Answer: _____

PROBLEM SOLVING

8. A shopkeeper packs 24 **pencils** in each box. There are 18 boxes. How many pencils in all?

   Answer: _____

9. A school sells 125 **tickets** at $6 each. How many dollars does it collect?

   Answer: _____

10. A farmer packs 45 **apples** in each box. There are 22 boxes. How many apples in all? Use an **estimate** to show it is reasonable.

    Answer: _____

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Solve Harder Problems

Use estimation and multiplication to solve real problems.

Task C

/10

Show the standard algorithm and check with an estimate.

WARM UP

1. Find the **product**: 67 × 4

Answer: _____

2. Find the **product**: 309 × 7

Answer: _____

3. Find the **product**: 2,315 × 3

Answer: _____

PRACTICE

4. Find the **product**: 54 × 27

Answer: _____

5. Find the **product**: 63 × 48

Answer: _____

6. Find the **product**: 135 × 16

Answer: _____

7. **Estimate** 41 × 19 as 40 × 20, then find the exact **product**.

Answer: _____

PROBLEM SOLVING

8. A bookstore orders 32 **boxes** with 24 books in each box. How many books in all?

Answer: _____

9. A bike costs $235. A store sells 14 **bikes** in one week. How many dollars does the store make?

Answer: _____

10. A class collects 15 **bags** with 36 cans in each bag, plus 125 extra cans. How many cans in all?

Answer: _____

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Spot The Mistake

Decide who uses the standard algorithm correctly.

Task D

/3

Talk about each idea. Who is correct and why?



Student A

How do you work out 27 × 34 with the **standard algorithm**?

First do 27 × 4 = 108. Then do 27 × 30 = 810. Add 108 + 810 = 918.



Student B

First do 27 × 4 = 108. Then do 27 × 3 = 81. Add 108 + 81 = 189.



Student C

7 × 4 = 28, write 8 and regroup 2, but 2 × 4 = 8, so 27 × 4 = 88. Then 88 + 810 = 898.



Student D

What do you think of each idea? Why?

Student B:

Student C:

Student D:

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Show Place Value

Line up digits and finish with column multiplication.

Task E

/4

Write each product in the chart to show its value.

Number	Thousands	Hundreds	Tens	Ones
108				
810				
918				
1944				

Task F

/4

Solve with the standard algorithm. Line up digits carefully.

1. 36 × 7

2. 418 × 5

3. 27 × 34

4. 1423 × 6

How did I do?

Circle a face for each line.

I can multiply multi-digit whole numbers using the standard algorithm.

I can regroup and use a zero placeholder correctly.

I can estimate to check my answer is reasonable.

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Answer sheet: Big Multiplication Mission

Task A

1. 1305
2. 800

Task B

1. 204
2. 456
3. 639
4. 2852
5. 432
6. 1680
7. 4922
8. 432
9. 750
10. 990

Task C

1. 268
2. 2163
3. 6945
4. 1458
5. 3024
6. 2160
7. 779
8. 768
9. 3290
10. 665

Task D

Student B: right

Student C: not right

Student D: not right

Student B is correct. You must multiply by the ones, then by the tens with a zero placeholder (27 × 30 = 810, not 81), and add any regrouped tens.

Task E

1. 108: – | 1 | 0 | 8
2. 810: – | 8 | 1 | 0
3. 918: – | 9 | 1 | 8
4. 1944: 1 | 9 | 4 | 4

Task F

1. 36 × 7 = 252
2. 418 × 5 = 2090
3. 27 × 34 = 918
4. 1423 × 6 = 8538

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