

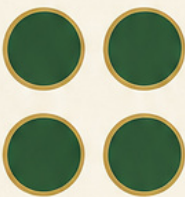
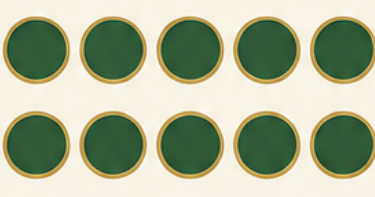
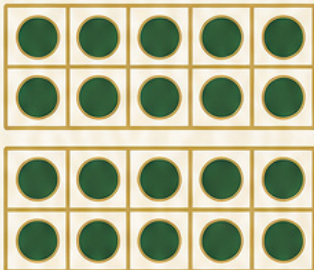


CLASS 1

Multiplication Facts



Equal Groups • Skip Counting • Number Patterns

$\times 2$	$\times 5$	$\times 10$
		
$2 \times 2 = 4$	$2 \times 5 = 10$	$2 \times 10 = 20$

Build confidence with multiplication.

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CLASS 1 • Multiplication Facts $\times 2$, $\times 5$, $\times 10$

1. Understanding Multiplication

Multiplication means **equal groups**.



3 equal groups of 2

$$2 + 2 + 2 = 6$$

Repeated addition

$$3 \times 2 = 6$$

Multiplication

3 groups $\times$ 2 apples in each group = 6 apples.

Try it: 4 groups of 2 = ____

Image 1 practice: Understanding multiplication

Q1. There are 7 small bowls with 2 beads in each bowl. Write a repeated-addition sentence and a multiplication sentence.

Q2. Draw 4 equal groups of 5 dots. How many dots are there? Label the number of groups and the number in each group.

Q3. Which addition sentence matches 6 groups of 2: A: $6 + 2$, or B: $2 + 2 + 2 + 2 + 2 + 2$? Find the total.

Q4. Three boxes contain 2, 2, and 5 buttons. Can 3×2 describe all the buttons? Explain, then find the actual total.

Q5. There are 2 rows of 9 stars. Find the total and write a multiplication fact with the factors reversed.

2. Multiplying by 2

Use doubles to find products.

Multiplying a number by 2 gives the same result as adding that number to itself.



Double 4

$$4 + 4 = 8$$

$$4 \times 2 = 8$$

Doubles facts

Addition	Multiplication
$1 + 1 = 2$	$1 \times 2 = 2$
$2 + 2 = 4$	$2 \times 2 = 4$
$3 + 3 = 6$	$3 \times 2 = 6$
$5 + 5 = 10$	$5 \times 2 = 10$
$10 + 10 = 20$	$10 \times 2 = 20$

Try it: $6 \times 2 =$ ____

Think: $6 + 6 =$ ____

Image 2 practice: Multiplying by 2

Q6. Find 7×2 . Explain a strategy you used.

Q7. Find 8×2 . Explain a strategy you used.

Q8. Find 9×2 . Explain a strategy you used.

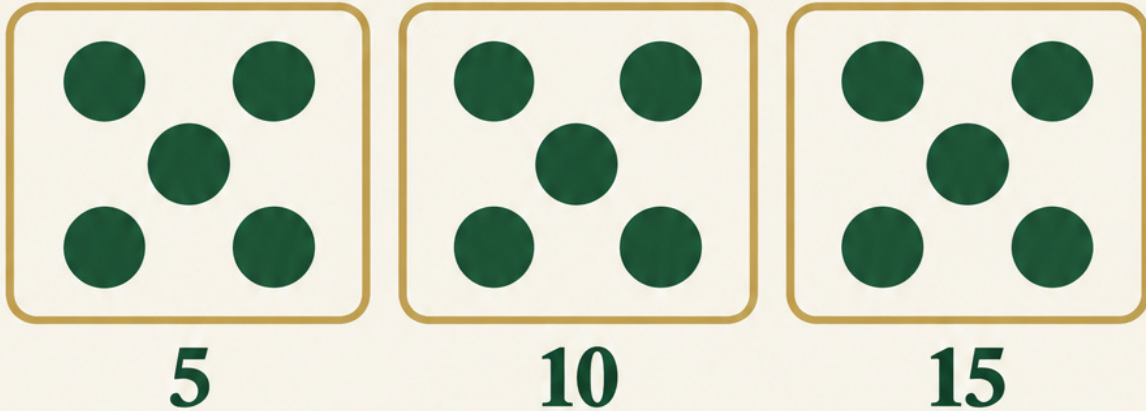
Q9. Find 11×2 . Explain a strategy you used.

Q10. Find 12×2 . Explain a strategy you used.

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3. Multiplying by 5

Count equal groups of five.

 $3 \text{ groups of } 5 = 15$

$$5 + 5 + 5 = 15$$
$$3 \times 5 = 15$$

Count by 5s

 $5 \rightarrow 10 \rightarrow 15 \rightarrow 20 \rightarrow 25 \rightarrow 30$

Some Multiplication Facts with 5

$1 \times 5 = 5$

$2 \times 5 = 10$

$4 \times 5 = 20$

$5 \times 5 = 25$

$6 \times 5 = 30$

Products of 5
end in 0 or 5.Try it: $7 \times 5 = \underline{\quad}$

Image 3 practice: Multiplying by 5

Q11. Find 8×5 . Explain a strategy you used.

Q12. Find 9×5 . Explain a strategy you used.

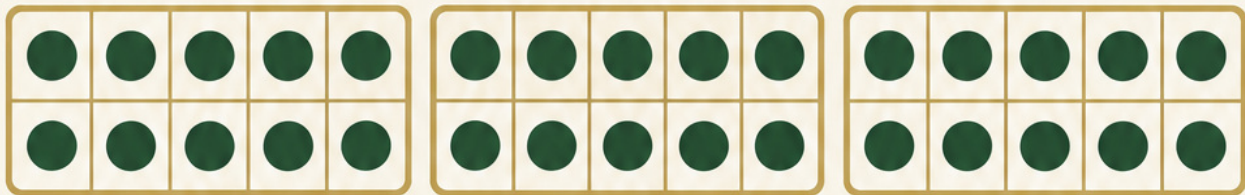
Q13. Find 10×5 . Explain a strategy you used.

Q14. Find 11×5 . Explain a strategy you used.

Q15. Find 12×5 . Explain a strategy you used.

4. Multiplying by 10

Each group of ten is one ten.



10

20

30

3 groups of 10 = 30

$$10 + 10 + 10 = 30$$

$$3 \times 10 = 30$$

Connect to place value

Tens	Ones
3	0

3 tens and 0 ones = 30

Count by 10s

10 → 20 → 30 → 40 → 50

Tip:

When a whole number is multiplied by 10, each digit moves one place to the left.

Try it: $6 \times 10 = \underline{\hspace{2cm}}$

$\underline{\hspace{2cm}}$ tens = $\underline{\hspace{2cm}}$

Image 4 practice: Multiplying by 10

Q16. Find 8×10 . Explain a strategy you used.

Q17. Find 9×10 . Explain a strategy you used.

Q18. Find 11×10 . Explain a strategy you used.

Q19. Find 12×10 . Explain a strategy you used.

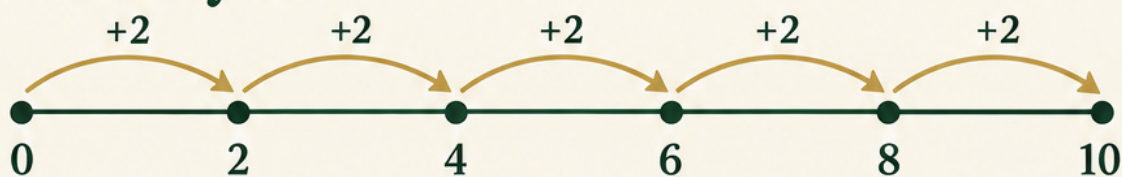
Q20. Fill in both blanks: $0 \times 10 = \underline{\quad}$ and $\underline{\quad} \times 10 = 50$.

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5. Skip Counting

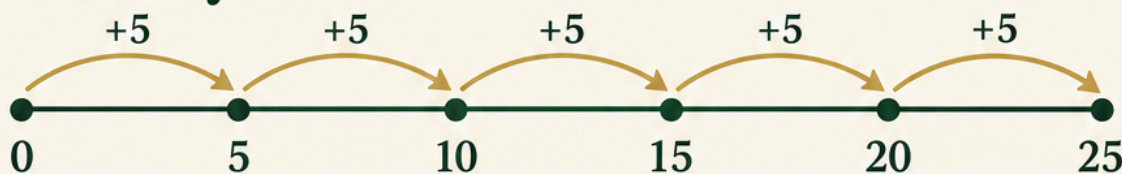
Make equal jumps on a number line.

Count by 2s



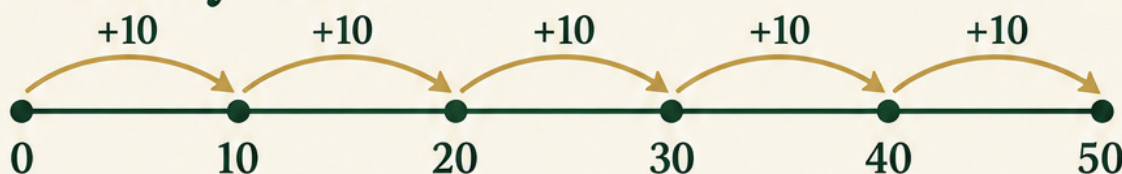
5 jumps of 2: $5 \times 2 = 10$

Count by 5s



5 jumps of 5: $5 \times 5 = 25$

Count by 10s



5 jumps of 10: $5 \times 10 = 50$

Number of jumps $\times$ size of each jump = total.

Try it: 0, 5, 10, ____, ____, ____

Image 5 practice: Skip counting on a number line

Q21. Start at 0 and make 8 jumps of 2. List the landing numbers and write a multiplication sentence.

Q22. Start at 0 and make 4 jumps of 5. Where do you land?

Q23. Start at 0 and make 7 jumps of 10. Write the last two landing numbers.

Q24. Complete the counting-by-5s sequence: 20, 25, __, __, 40. How many jumps go from 20 to 40?

Q25. A frog starts at 10 and makes 3 forward jumps of 5. Where does it land? Why is 3×5 not the final position?

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6. Recognizing Patterns

Look at the last digit of each product.

$\times 2$: Every product is even

2, 4, 6, 8, 10, 12

The last digit is **0, 2, 4, 6**, or **8**.

$$4 \times 2 = 8$$

$$6 \times 2 = 12$$

$\times 5$: Products end in 0 or 5

5, 10, 15, 20, 25, 30

The last digit alternates: **5, 0, 5, 0, ...**

$$3 \times 5 = 15$$

$$4 \times 5 = 20$$

$\times 10$: Products end in 0

10, 20, 30, 40, 50, 60

Every product is a whole number of tens.

$$3 \times 10 = 30$$

$$6 \times 10 = 60$$

Spot the mistake

$$2 \times 7 = 15$$

Can a $\times 2$ product end in 5?

Image 6 practice: Recognizing multiplication patterns

Q26. Which numbers could be products of a whole number and 2: 13, 18, 21, or 24?

Q27. Which numbers could be products of a whole number and 5: 25, 32, 40, or 46?

Q28. Which number is a multiple of both 5 and 10: 35, 45, or 60? Give both multiplication facts.

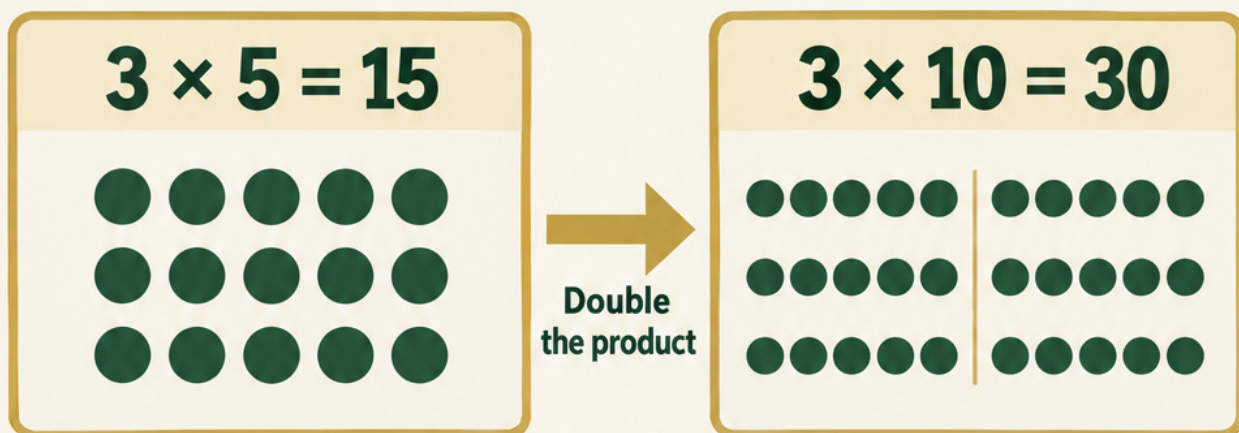
Q29. A student writes $9 \times 2 = 19$. Use a pattern to show the answer is wrong, then correct it.

Q30. Mia says, " 7×5 must be 40 because 40 ends in 0." Is her reasoning enough? Find the correct product.

7. Connecting Multiplication Facts

Double a $\times 5$ product to find the $\times 10$ product.

10 is double 5, so the product doubles too.



$$15 + 15 = 30$$

Known $\times 5$ fact	Double to find $\times 10$
$2 \times 5 = 10$	$2 \times 10 = 20$
$4 \times 5 = 20$	$4 \times 10 = 40$
$6 \times 5 = 30$	$6 \times 10 = 60$

Try it:

$$7 \times 5 = 35 \qquad 7 \times 10 = \underline{\quad}$$

Double 35.

Image 7 practice: Connecting $\times 5$ and $\times 10$ facts

Q31. You know $8 \times 5 = 40$. Use that fact to find 8×10 .

Q32. You know $9 \times 5 = 45$. Find 9×10 without skip counting from 0.

Q33. Use $11 \times 5 = 55$ to find 11×10 . Explain what doubles.

Q34. You know $12 \times 10 = 120$. What is 12×5 ?

Q35. A student changes $4 \times 5 = 20$ into $8 \times 10 = 40$ by doubling both factors. Find 8×10 and explain the mistake.

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8. Solving Word Problems

Find the equal groups, then multiply.

$\times 2$ • Bicycle wheels

There are 4 bicycles. Each bicycle has 2 wheels.
How many wheels are there?



$$4 \times 2 = 8$$

There are 8 wheels.

$\times 5$ • Pencil packs

There are 3 packs of pencils. Each pack has 5 pencils.
How many pencils are there?



$$3 \times 5 = 15$$

There are 15 pencils.

$\times 10$ • Sticker sheets

There are 4 sheets of stickers. Each sheet has 10 stickers.
How many stickers are there?



$$4 \times 10 = 40$$

There are 40 stickers.

Try it: There are 6 pairs of gloves. How many gloves are there?



____ $\times$ ____ = ____ gloves

Image 8 practice: Solving multiplication word problems

Q36. A shirt has 2 buttons. There are 8 identical shirts. How many buttons are there altogether?

Q37. There are 9 boxes with 5 crayons in each box. How many crayons are there?

Q38. A teacher has 7 envelopes, each holding 10 cards. How many cards does the teacher have?

Q39. Five children each bring 2 markers. The teacher adds 3 more markers. How many markers are there now?

Q40. A class has 8 packs of 5 sheets of colored paper. It uses 10 sheets. How many sheets are left?

Homework review: R1–R5

R1. Draw 5 equal groups of 2 triangles. Write a repeated-addition sentence and a multiplication sentence.

R2. Find 13×2 using a double.

R3. Find 12×5 by starting with $10 \times 5 = 50$ and adding two more groups.

R4. Find 7×10 . How many tens are in the product?

R5. Start at 0 and make 6 jumps of 5. Where do you land? Do you count 0 as a jump?

Homework review: R6–R8

R6. A student writes $8 \times 5 = 42$. Explain why the ones digit reveals a mistake, then correct the fact.

R7. You know $13 \times 5 = 65$. Use doubling to find 13×10 .

R8. A gardener plants 6 rows with 5 seedlings in each row. How many seedlings are planted?

Homework word problems: W1–W5

W1. There are 3 pairs of socks. Each pair has 2 socks. How many socks are there?

W2. Four snack bags each contain 5 crackers. How many crackers are there?

W3. Six tubes each hold 10 beads. How many beads are there altogether?

W4. Nine children each need 2 paper wings for a costume. How many paper wings are needed?

W5. A club collects 5 cans each day for 8 days. How many cans does it collect?

Homework word problems: W6–W10

W6. There are 11 trays with 10 cups on each tray. How many cups are there?

W7. A florist makes 6 bunches with 5 flowers in each bunch. She adds 4 loose flowers to the order. How many flowers are in the order?

W8. A teacher has 9 packs of 10 reward cards and gives away 20 cards. How many remain?

W9. Maya has 7 bags with 5 marbles in each. Leo has 4 bags with 10 marbles in each. Who has more marbles, and how many more?

W10. A game needs 45 counters. Each unopened bag contains 5 counters. Sam has 6 bags. How many additional bags does Sam need?

Homework word problems: W11–W12

W11. A prize table has 8 small packs with 2 stickers in each and 5 large packs with 10 stickers in each. How many stickers are there altogether?

W12. A class needs 80 craft sticks. It has 5 full boxes of 10 sticks and 4 full bundles of 5 sticks. How many more bundles of 5 does it need?