TimesQuest — Flashcards

A Spark & Anvil printable flashcard deck. Quiz yourself on the TimesQuest cast's curriculum — one card at a time.

How to use these cards

Fold each sheet down the middle line so the answers are hidden. Read the **question** on the left, say your answer out loud, then **unfold** to check the right side. Testing yourself — then checking — is one of the most powerful ways to remember. Get one wrong? That's the best kind of practice: try it again tomorrow.

Want real flashcards? Cut along the fold line and the rows into cards — question on one side, answer on the other.

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1. Equal Groups & Arrays

✂ Question (fold →)	Answer
There are 8 baskets. Each basket holds 9 apples. How many apples in all?	**72** — 8 equal groups of 9 is 8 × 9 = 72. Building it as an array — 8 rows with 9 in each row — shows why: every row is the same, so you add 9 a total of 8 times.
There are 8 baskets. Each basket holds 5 apples. How many apples in all?	**40** — 8 equal groups of 5 is 8 × 5 = 40. Building it as an array — 8 rows with 5 in each row — shows why: every row is the same, so you add 5 a total of 8 times.
There are 6 baskets. Each basket holds 7 apples. How many apples in all?	**42** — 6 equal groups of 7 is 6 × 7 = 42. Building it as an array — 6 rows with 7 in each row — shows why: every row is the same, so you add 7 a total of 6 times.
There are 3 baskets. Each basket holds 5 apples. How many apples in all?	**15** — 3 equal groups of 5 is 3 × 5 = 15. Building it as an array — 3 rows with 5 in each row — shows why: every row is the same, so you add 5 a total of 3 times.
There are 6 baskets. Each basket holds 2 apples. How many apples in all?	**12** — 6 equal groups of 2 is 6 × 2 = 12. Building it as an array — 6 rows with 2 in each row — shows why: every row is the same, so you add 2 a total of 6 times.
There are 7 baskets. Each basket holds 9 apples. How many apples in all?	**63** — 7 equal groups of 9 is 7 × 9 = 63. Building it as an array — 7 rows with 9 in each row — shows why: every row is the same, so you add 9 a total of 7 times.
There are 7 baskets. Each basket holds 5 apples. How many apples in all?	**35** — 7 equal groups of 5 is 7 × 5 = 35. Building it as an array — 7 rows with 5 in each row — shows why: every row is the same, so you add 5 a total of 7 times.
There are 3 baskets. Each basket holds 8 apples. How many apples in all?	**24** — 3 equal groups of 8 is 3 × 8 = 24. Building it as an array — 3 rows with 8 in each row — shows why: every row is the same, so you add 8 a total of 3 times.
There are 4 baskets. Each basket holds 7 apples. How many apples in all?	**28** — 4 equal groups of 7 is 4 × 7 = 28. Building it as an array — 4 rows with 7 in each row — shows why: every row is the same, so you add 7 a total of 4 times.
There are 7 baskets. Each basket holds 8 apples. How many apples in all?	**56** — 7 equal groups of 8 is 7 × 8 = 56. Building it as an array — 7 rows with 8 in each row — shows why: every row is the same, so you add 8 a total of 7 times.
There are 10 baskets. Each basket holds 8 apples. How many apples in all?	**80** — 10 equal groups of 8 is 10 × 8 = 80. Building it as an array — 10 rows with 8 in each row — shows why: every row is the same, so you add 8 a total of 10 times.
There are 10 baskets. Each basket holds 3 apples. How many apples in all?	**30** — 10 equal groups of 3 is 10 × 3 = 30. Building it as an array — 10 rows with 3 in each row — shows why: every row is the same, so you add 3 a total of 10 times.
There are 3 baskets. Each basket holds 10 apples. How many apples in all?	**30** — 3 equal groups of 10 is 3 × 10 = 30. Building it as an array — 3 rows with 10 in each row — shows why: every row is the same, so you add 10 a total of 3 times.

There are 3 baskets. Each basket holds 4 apples. How many apples in all?	**12** — 3 equal groups of 4 is 3 × 4 = 12. Building it as an array — 3 rows with 4 in each row — shows why: every row is the same, so you add 4 a total of 3 times.
There are 10 baskets. Each basket holds 10 apples. How many apples in all?	**100** — 10 equal groups of 10 is 10 × 10 = 100. Building it as an array — 10 rows with 10 in each row — shows why: every row is the same, so you add 10 a total of 10 times.
There are 5 baskets. Each basket holds 8 apples. How many apples in all?	**40** — 5 equal groups of 8 is 5 × 8 = 40. Building it as an array — 5 rows with 8 in each row — shows why: every row is the same, so you add 8 a total of 5 times.
There are 8 baskets. Each basket holds 3 apples. How many apples in all?	**24** — 8 equal groups of 3 is 8 × 3 = 24. Building it as an array — 8 rows with 3 in each row — shows why: every row is the same, so you add 3 a total of 8 times.
There are 4 baskets. Each basket holds 2 apples. How many apples in all?	**8** — 4 equal groups of 2 is 4 × 2 = 8. Building it as an array — 4 rows with 2 in each row — shows why: every row is the same, so you add 2 a total of 4 times.
There are 10 baskets. Each basket holds 2 apples. How many apples in all?	**20** — 10 equal groups of 2 is 10 × 2 = 20. Building it as an array — 10 rows with 2 in each row — shows why: every row is the same, so you add 2 a total of 10 times.
There are 2 baskets. Each basket holds 8 apples. How many apples in all?	**16** — 2 equal groups of 8 is 2 × 8 = 16. Building it as an array — 2 rows with 8 in each row — shows why: every row is the same, so you add 8 a total of 2 times.

2. Arrays & Turn-Arounds

✂ Question (fold →)	Answer
An array of 2 rows and 8 columns shows 2 × 8 = 16. Which array also equals 16?	**8 × 2** — Rotating the array swaps rows and columns: 2 × 8 = 8 × 2 = 16. This is the commutative property — order doesn't change the product.
An array of 2 rows and 4 columns shows 2 × 4 = 8. Which array also equals 8?	**4 × 2** — Rotating the array swaps rows and columns: 2 × 4 = 4 × 2 = 8. This is the commutative property — order doesn't change the product.
An array has 2 rows with 3 dots in each row. How many dots?	**6** — 2 rows of 3 is 2 × 3 = 6. An array turns repeated equal groups into a rectangle you can count by rows.
An array of 5 rows and 9 columns shows 5 × 9 = 45. Which array also equals 45?	**9 × 5** — Rotating the array swaps rows and columns: 5 × 9 = 9 × 5 = 45. This is the commutative property — order doesn't change the product.
An array has 8 rows with 10 dots in each row. How many dots?	**80** — 8 rows of 10 is 8 × 10 = 80. An array turns repeated equal groups into a rectangle you can count by rows.
An array has 8 rows with 9 dots in each row. How many dots?	**72** — 8 rows of 9 is 8 × 9 = 72. An array turns repeated equal groups into a rectangle you can count by rows.
An array has 3 rows with 6 dots in each row. How many dots?	**18** — 3 rows of 6 is 3 × 6 = 18. An array turns repeated equal groups into a rectangle you can count by rows.
An array of 4 rows and 10 columns shows 4 × 10 = 40. Which array also equals 40?	**10 × 4** — Rotating the array swaps rows and columns: 4 × 10 = 10 × 4 = 40. This is the commutative property — order doesn't change the product.
An array has 5 rows with 6 dots in each row. How many dots?	**30** — 5 rows of 6 is 5 × 6 = 30. An array turns repeated equal groups into a rectangle you can count by rows.
An array has 2 rows with 2 dots in each row. How many dots?	**4** — 2 rows of 2 is 2 × 2 = 4. An array turns repeated equal groups into a rectangle you can count by rows.
An array of 3 rows and 8 columns shows 3 × 8 = 24. Which array also equals 24?	**8 × 3** — Rotating the array swaps rows and columns: 3 × 8 = 8 × 3 = 24. This is the commutative property — order doesn't change the product.
An array of 8 rows and 8 columns shows 8 × 8 = 64. Which array also equals 64?	**8 × 8** — Rotating the array swaps rows and columns: 8 × 8 = 8 × 8 = 64. This is the commutative property — order doesn't change the product.
An array has 2 rows with 10 dots in each row. How many dots?	**20** — 2 rows of 10 is 2 × 10 = 20. An array turns repeated equal groups into a rectangle you can count by rows.
An array of 6 rows and 6 columns shows 6 × 6 = 36. Which array also equals 36?	**6 × 6** — Rotating the array swaps rows and columns: 6 × 6 = 6 × 6 = 36. This is the commutative property — order doesn't change the product.
An array of 5 rows and 5 columns shows 5 × 5 = 25. Which array also equals 25?	**5 × 5** — Rotating the array swaps rows and columns: 5 × 5 = 5 × 5 = 25. This is the commutative property — order doesn't change the product.
An array has 5 rows with 8 dots in each row. How many dots?	**40** — 5 rows of 8 is 5 × 8 = 40. An array turns repeated equal groups into a rectangle you can count by rows.
An array has 3 rows with 9 dots in each row. How many dots?	**27** — 3 rows of 9 is 3 × 9 = 27. An array turns repeated equal groups into a rectangle you can count by rows.
An array of 6 rows and 7 columns shows	**7 × 6** — Rotating the array swaps rows and columns: 6 × 7 = 7 × 6 = 42.

6 × 7 = 42. Which array also equals 42?	This is the commutative property — order doesn't change the product.
An array has 6 rows with 8 dots in each row. How many dots?	**48** — 6 rows of 8 is 6 × 8 = 48. An array turns repeated equal groups into a rectangle you can count by rows.
An array of 3 rows and 7 columns shows 3 × 7 = 21. Which array also equals 21?	**7 × 3** — Rotating the array swaps rows and columns: 3 × 7 = 7 × 3 = 21. This is the commutative property — order doesn't change the product.

3. Fair Shares

✂ Question (fold →)	Answer
18 stickers are shared fairly among 9 friends. How many stickers does each friend get?	**2** — 18 ÷ 9 = 2. Sharing 18 into 9 equal groups puts 2 in each group, because 9 × 2 = 18.
16 stickers are shared fairly among 4 friends. How many stickers does each friend get?	**4** — 16 ÷ 4 = 4. Sharing 16 into 4 equal groups puts 4 in each group, because 4 × 4 = 16.
49 stickers are shared fairly among 7 friends. How many stickers does each friend get?	**7** — 49 ÷ 7 = 7. Sharing 49 into 7 equal groups puts 7 in each group, because 7 × 7 = 49.
63 stickers are shared fairly among 7 friends. How many stickers does each friend get?	**9** — 63 ÷ 7 = 9. Sharing 63 into 7 equal groups puts 9 in each group, because 7 × 9 = 63.
48 stickers are shared fairly among 6 friends. How many stickers does each friend get?	**8** — 48 ÷ 6 = 8. Sharing 48 into 6 equal groups puts 8 in each group, because 6 × 8 = 48.
64 stickers are shared fairly among 8 friends. How many stickers does each friend get?	**8** — 64 ÷ 8 = 8. Sharing 64 into 8 equal groups puts 8 in each group, because 8 × 8 = 64.
4 stickers are shared fairly among 2 friends. How many stickers does each friend get?	**2** — 4 ÷ 2 = 2. Sharing 4 into 2 equal groups puts 2 in each group, because 2 × 2 = 4.
50 stickers are shared fairly among 10 friends. How many stickers does each friend get?	**5** — 50 ÷ 10 = 5. Sharing 50 into 10 equal groups puts 5 in each group, because 10 × 5 = 50.
21 stickers are shared fairly among 7 friends. How many stickers does each friend get?	**3** — 21 ÷ 7 = 3. Sharing 21 into 7 equal groups puts 3 in each group, because 7 × 3 = 21.
15 stickers are shared fairly among 5 friends. How many stickers does each friend get?	**3** — 15 ÷ 5 = 3. Sharing 15 into 5 equal groups puts 3 in each group, because 5 × 3 = 15.
40 stickers are shared fairly among 5 friends. How many stickers does each friend get?	**8** — 40 ÷ 5 = 8. Sharing 40 into 5 equal groups puts 8 in each group, because 5 × 8 = 40.
70 stickers are shared fairly among 7 friends. How many stickers does each friend get?	**10** — 70 ÷ 7 = 10. Sharing 70 into 7 equal groups puts 10 in each group, because 7 × 10 = 70.
25 stickers are shared fairly among 5 friends. How many stickers does each friend get?	**5** — 25 ÷ 5 = 5. Sharing 25 into 5 equal groups puts 5 in each group, because 5 × 5 = 25.
40 stickers are shared fairly among 4 friends. How many stickers does each friend get?	**10** — 40 ÷ 4 = 10. Sharing 40 into 4 equal groups puts 10 in each group, because 4 × 10 = 40.
100 stickers are shared fairly among 10 friends. How many stickers does each friend get?	**10** — 100 ÷ 10 = 10. Sharing 100 into 10 equal groups puts 10 in each group, because 10 × 10 = 100.
16 stickers are shared fairly among 2 friends. How many stickers does each friend get?	**8** — 16 ÷ 2 = 8. Sharing 16 into 2 equal groups puts 8 in each group, because 2 × 8 = 16.
24 stickers are shared fairly among 8 friends. How many stickers does each friend get?	**3** — 24 ÷ 8 = 3. Sharing 24 into 8 equal groups puts 3 in each group, because 8 × 3 = 24.
21 stickers are shared fairly among 3 friends. How many stickers does each friend get?	**7** — 21 ÷ 3 = 7. Sharing 21 into 3 equal groups puts 7 in each group, because 3 × 7 = 21.

12 stickers are shared fairly among 6 friends. How many stickers does each friend get?	**2** — 12 ÷ 6 = 2. Sharing 12 into 6 equal groups puts 2 in each group, because 6 × 2 = 12.
18 stickers are shared fairly among 2 friends. How many stickers does each friend get?	**9** — 18 ÷ 2 = 9. Sharing 18 into 2 equal groups puts 9 in each group, because 2 × 9 = 18.

4. Fact Families

✂ Question (fold →)	Answer
You know 4 × 7 = 28. So 28 ÷ 7 = ?	**4** — 4, 7, and 28 are one fact family: 4 × 7 = 28 and 28 ÷ 7 = 4. Knowing the multiplication fact gives you the division fact free.
You know 4 × 2 = 8. So 8 ÷ 2 = ?	**4** — 4, 2, and 8 are one fact family: 4 × 2 = 8 and 8 ÷ 2 = 4. Knowing the multiplication fact gives you the division fact free.
You know 7 × 5 = 35. So 35 ÷ 5 = ?	**7** — 7, 5, and 35 are one fact family: 7 × 5 = 35 and 35 ÷ 5 = 7. Knowing the multiplication fact gives you the division fact free.
You know 5 × 2 = 10. So 10 ÷ 2 = ?	**5** — 5, 2, and 10 are one fact family: 5 × 2 = 10 and 10 ÷ 2 = 5. Knowing the multiplication fact gives you the division fact free.
You know 6 × 2 = 12. So 12 ÷ 2 = ?	**6** — 6, 2, and 12 are one fact family: 6 × 2 = 12 and 12 ÷ 2 = 6. Knowing the multiplication fact gives you the division fact free.
You know 2 × 3 = 6. So 6 ÷ 3 = ?	**2** — 2, 3, and 6 are one fact family: 2 × 3 = 6 and 6 ÷ 3 = 2. Knowing the multiplication fact gives you the division fact free.
You know 4 × 3 = 12. So 12 ÷ 3 = ?	**4** — 4, 3, and 12 are one fact family: 4 × 3 = 12 and 12 ÷ 3 = 4. Knowing the multiplication fact gives you the division fact free.
You know 6 × 6 = 36. So 36 ÷ 6 = ?	**6** — 6, 6, and 36 are one fact family: 6 × 6 = 36 and 36 ÷ 6 = 6. Knowing the multiplication fact gives you the division fact free.
You know 5 × 5 = 25. So 25 ÷ 5 = ?	**5** — 5, 5, and 25 are one fact family: 5 × 5 = 25 and 25 ÷ 5 = 5. Knowing the multiplication fact gives you the division fact free.
You know 6 × 8 = 48. So 48 ÷ 8 = ?	**6** — 6, 8, and 48 are one fact family: 6 × 8 = 48 and 48 ÷ 8 = 6. Knowing the multiplication fact gives you the division fact free.
You know 10 × 9 = 90. So 90 ÷ 9 = ?	**10** — 10, 9, and 90 are one fact family: 10 × 9 = 90 and 90 ÷ 9 = 10. Knowing the multiplication fact gives you the division fact free.
You know 10 × 4 = 40. So 40 ÷ 4 = ?	**10** — 10, 4, and 40 are one fact family: 10 × 4 = 40 and 40 ÷ 4 = 10. Knowing the multiplication fact gives you the division fact free.
You know 5 × 10 = 50. So 50 ÷ 10 = ?	**5** — 5, 10, and 50 are one fact family: 5 × 10 = 50 and 50 ÷ 10 = 5. Knowing the multiplication fact gives you the division fact free.
You know 10 × 8 = 80. So 80 ÷ 8 = ?	**10** — 10, 8, and 80 are one fact family: 10 × 8 = 80 and 80 ÷ 8 = 10. Knowing the multiplication fact gives you the division fact free.
You know 3 × 3 = 9. So 9 ÷ 3 = ?	**3** — 3, 3, and 9 are one fact family: 3 × 3 = 9 and 9 ÷ 3 = 3. Knowing the multiplication fact gives you the division fact free.
You know 7 × 8 = 56. So 56 ÷ 8 = ?	**7** — 7, 8, and 56 are one fact family: 7 × 8 = 56 and 56 ÷ 8 = 7. Knowing the multiplication fact gives you the division fact free.
You know 4 × 5 = 20. So 20 ÷ 5 = ?	**4** — 4, 5, and 20 are one fact family: 4 × 5 = 20 and 20 ÷ 5 = 4. Knowing the multiplication fact gives you the division fact free.
You know 5 × 9 = 45. So 45 ÷ 9 = ?	**5** — 5, 9, and 45 are one fact family: 5 × 9 = 45 and 45 ÷ 9 = 5. Knowing the multiplication fact gives you the division fact free.

You know 3 × 7 = 21. So 21 ÷ 7 = ?	**3** — 3, 7, and 21 are one fact family: 3 × 7 = 21 and 21 ÷ 7 = 3. Knowing the multiplication fact gives you the division fact free.
You know 2 × 8 = 16. So 16 ÷ 8 = ?	**2** — 2, 8, and 16 are one fact family: 2 × 8 = 16 and 16 ÷ 8 = 2. Knowing the multiplication fact gives you the division fact free.

5. Break-Apart Strategy

✂ Question (fold →)	Answer
Which break-apart helps you find 9 × 8 using easier facts?	**(5 × 8) + (4 × 8)** — Split 9 into 5 + 4, then multiply each part by 8: (5 × 8) + (4 × 8). Both parts use the same 8, and 40 + 32 = 72 = 9 × 8.
To find 8 × 8, split it: (5 × 8) + (3 × 8) = 40 + 24 = ?	**64** — 8 × 8 = (5+3) × 8 = 40 + 24 = 64. Breaking a hard fact into two facts you already know is the break-apart strategy — it builds toward remembering the fact.
Which break-apart helps you find 7 × 9 using easier facts?	**(5 × 9) + (2 × 9)** — Split 7 into 5 + 2, then multiply each part by 9: (5 × 9) + (2 × 9). Both parts use the same 9, and 45 + 18 = 63 = 7 × 9.
To find 8 × 7, split it: (5 × 7) + (3 × 7) = 35 + 21 = ?	**56** — 8 × 7 = (5+3) × 7 = 35 + 21 = 56. Breaking a hard fact into two facts you already know is the break-apart strategy — it builds toward remembering the fact.
To find 8 × 9, split it: (5 × 9) + (3 × 9) = 45 + 27 = ?	**72** — 8 × 9 = (5+3) × 9 = 45 + 27 = 72. Breaking a hard fact into two facts you already know is the break-apart strategy — it builds toward remembering the fact.
Which break-apart helps you find 8 × 6 using easier facts?	**(5 × 6) + (3 × 6)** — Split 8 into 5 + 3, then multiply each part by 6: (5 × 6) + (3 × 6). Both parts use the same 6, and 30 + 18 = 48 = 8 × 6.
Which break-apart helps you find 7 × 6 using easier facts?	**(5 × 6) + (2 × 6)** — Split 7 into 5 + 2, then multiply each part by 6: (5 × 6) + (2 × 6). Both parts use the same 6, and 30 + 12 = 42 = 7 × 6.
To find 6 × 6, split it: (5 × 6) + (1 × 6) = 30 + 6 = ?	**36** — 6 × 6 = (5+1) × 6 = 30 + 6 = 36. Breaking a hard fact into two facts you already know is the break-apart strategy — it builds toward remembering the fact.
Which break-apart helps you find 7 × 7 using easier facts?	**(5 × 7) + (2 × 7)** — Split 7 into 5 + 2, then multiply each part by 7: (5 × 7) + (2 × 7). Both parts use the same 7, and 35 + 14 = 49 = 7 × 7.
Which break-apart helps you find 6 × 7 using easier facts?	**(5 × 7) + (1 × 7)** — Split 6 into 5 + 1, then multiply each part by 7: (5 × 7) + (1 × 7). Both parts use the same 7, and 35 + 7 = 42 = 6 × 7.
Which break-apart helps you find 6 × 7 using easier facts?	**(5 × 7) + (1 × 7)** — Split 6 into 5 + 1, then multiply each part by 7: (5 × 7) + (1 × 7). Both parts use the same 7, and 35 + 7 = 42 = 6 × 7.
To find 9 × 7, split it: (5 × 7) + (4 × 7) = 35 + 28 = ?	**63** — 9 × 7 = (5+4) × 7 = 35 + 28 = 63. Breaking a hard fact into two facts you already know is the break-apart strategy — it builds toward remembering the fact.
To find 9 × 7, split it: (5 × 7) + (4 × 7) = 35 + 28 = ?	**63** — 9 × 7 = (5+4) × 7 = 35 + 28 = 63. Breaking a hard fact into two facts you already know is the break-apart strategy — it builds toward remembering the fact.
To find 6 × 8, split it: (5 × 8) + (1 × 8) = 40 + 8 = ?	**48** — 6 × 8 = (5+1) × 8 = 40 + 8 = 48. Breaking a hard fact into two facts you already know is the break-apart strategy — it builds toward remembering the fact.
Which break-apart helps you find 9 × 6 using easier facts?	**(5 × 6) + (4 × 6)** — Split 9 into 5 + 4, then multiply each part by 6: (5 × 6) + (4 × 6). Both parts use the same 6, and 30 + 24 = 54 = 9 × 6.
To find 7 × 8, split it: (5 × 8) + (2 × 8) = 40 + 16 = ?	**56** — 7 × 8 = (5+2) × 8 = 40 + 16 = 56. Breaking a hard fact into two facts you already know is the break-apart strategy — it builds toward remembering the fact.
To find 7 × 8, split it: (5 × 8) + (2 × 8) = 40 + 16 = ?	**56** — 7 × 8 = (5+2) × 8 = 40 + 16 = 56. Breaking a hard fact into two facts you already know is the break-apart strategy — it builds toward remembering the fact.
Which break-apart helps you find 6 × 9 using easier facts?	**(5 × 9) + (1 × 9)** — Split 6 into 5 + 1, then multiply each part by 9: (5 × 9) + (1 × 9). Both parts use the same 9, and 45 + 9 = 54 = 6 × 9.

Which break-apart helps you find 6 × 9 using easier facts?	**(5 × 9) + (1 × 9)** — Split 6 into 5 + 1, then multiply each part by 9: (5 × 9) + (1 × 9). Both parts use the same 9, and 45 + 9 = 54 = 6 × 9.
To find 9 × 9, split it: (5 × 9) + (4 × 9) = 45 + 36 = ?	**81** — 9 × 9 = (5+4) × 9 = 45 + 36 = 81. Breaking a hard fact into two facts you already know is the break-apart strategy — it builds toward remembering the fact.

6. Equal Parts

✂ Question (fold →)	Answer
A whole strip is split into 6 equal parts. What fraction is ONE part?	**1/6** — When a whole is cut into 6 equal parts, each part is 1/6. The bottom number (6) tells how many equal parts make the whole; the top (1) says you have one of them.
A whole strip is split into 6 equal parts. What fraction is ONE part?	**1/6** — When a whole is cut into 6 equal parts, each part is 1/6. The bottom number (6) tells how many equal parts make the whole; the top (1) says you have one of them.
A whole strip is split into 6 equal parts. What fraction is ONE part?	**1/6** — When a whole is cut into 6 equal parts, each part is 1/6. The bottom number (6) tells how many equal parts make the whole; the top (1) says you have one of them.
How many 1/8 pieces make one whole?	**8** — It takes 8 copies of 1/8 to make 1 whole: 8 × 1/8 = 8/8 = 1.
A whole strip is split into 8 equal parts. What fraction is ONE part?	**1/8** — When a whole is cut into 8 equal parts, each part is 1/8. The bottom number (8) tells how many equal parts make the whole; the top (1) says you have one of them.
How many 1/2 pieces make one whole?	**2** — It takes 2 copies of 1/2 to make 1 whole: 2 × 1/2 = 2/2 = 1.
A whole strip is split into 4 equal parts. What fraction is ONE part?	**1/4** — When a whole is cut into 4 equal parts, each part is 1/4. The bottom number (4) tells how many equal parts make the whole; the top (1) says you have one of them.
A whole strip is split into 4 equal parts. What fraction is ONE part?	**1/4** — When a whole is cut into 4 equal parts, each part is 1/4. The bottom number (4) tells how many equal parts make the whole; the top (1) says you have one of them.
A whole strip is split into 5 equal parts. What fraction is ONE part?	**1/5** — When a whole is cut into 5 equal parts, each part is 1/5. The bottom number (5) tells how many equal parts make the whole; the top (1) says you have one of them.
A whole strip is split into 5 equal parts. What fraction is ONE part?	**1/5** — When a whole is cut into 5 equal parts, each part is 1/5. The bottom number (5) tells how many equal parts make the whole; the top (1) says you have one of them.
A whole strip is split into 2 equal parts. What fraction is ONE part?	**1/2** — When a whole is cut into 2 equal parts, each part is 1/2. The bottom number (2) tells how many equal parts make the whole; the top (1) says you have one of them.
A whole strip is split into 2 equal parts. What fraction is ONE part?	**1/2** — When a whole is cut into 2 equal parts, each part is 1/2. The bottom number (2) tells how many equal parts make the whole; the top (1) says you have one of them.
How many 1/4 pieces make one whole?	**4** — It takes 4 copies of 1/4 to make 1 whole: 4 × 1/4 = 4/4 = 1.
How many 1/6 pieces make one whole?	**6** — It takes 6 copies of 1/6 to make 1 whole: 6 × 1/6 = 6/6 = 1.
A whole strip is split into 3	**1/3** — When a whole is cut into 3 equal parts, each part is 1/3. The bottom number

equal parts. What fraction is ONE part?	(3) tells how many equal parts make the whole; the top (1) says you have one of them.
A whole strip is split into 3 equal parts. What fraction is ONE part?	**1/3** — When a whole is cut into 3 equal parts, each part is 1/3. The bottom number (3) tells how many equal parts make the whole; the top (1) says you have one of them.
A whole strip is split into 3 equal parts. What fraction is ONE part?	**1/3** — When a whole is cut into 3 equal parts, each part is 1/3. The bottom number (3) tells how many equal parts make the whole; the top (1) says you have one of them.
A whole strip is split into 3 equal parts. What fraction is ONE part?	**1/3** — When a whole is cut into 3 equal parts, each part is 1/3. The bottom number (3) tells how many equal parts make the whole; the top (1) says you have one of them.
How many 1/5 pieces make one whole?	**5** — It takes 5 copies of 1/5 to make 1 whole: 5 × 1/5 = 5/5 = 1.
How many 1/3 pieces make one whole?	**3** — It takes 3 copies of 1/3 to make 1 whole: 3 × 1/3 = 3/3 = 1.

7. Fractions on the Line

✂ Question (fold →)	Answer
On a number line from 0 to 1 split into 8 equal jumps, you land on the 5th jump from 0. What number are you on?	**5/8** — From 0, each equal jump is 1/8. After 5 jumps you are at 5/8. On a number line a fraction is a NUMBER — a point — not just a piece of a shape.
On a number line from 0 to 1 split into 2 equal jumps, you land on the 1st jump from 0. What number are you on?	**1/2** — From 0, each equal jump is 1/2. After 1 jumps you are at 1/2. On a number line a fraction is a NUMBER — a point — not just a piece of a shape.
Predict: on the same number line, which is FARTHER from 0, 1/4 or 3/4?	**3/4** — With the same bottom number, both use 1/4 jumps, so more jumps = farther. 3/4 is farther from 0 than 1/4. Predict, then count the jumps to check (predict-observe-explain).
On a number line from 0 to 1 split into 8 equal jumps, you land on the 1st jump from 0. What number are you on?	**1/8** — From 0, each equal jump is 1/8. After 1 jumps you are at 1/8. On a number line a fraction is a NUMBER — a point — not just a piece of a shape.
Predict: on the same number line, which is FARTHER from 0, 1/6 or 5/6?	**5/6** — With the same bottom number, both use 1/6 jumps, so more jumps = farther. 5/6 is farther from 0 than 1/6. Predict, then count the jumps to check (predict-observe-explain).
Predict: on the same number line, which is FARTHER from 0, 2/3 or 1/3?	**2/3** — With the same bottom number, both use 1/3 jumps, so more jumps = farther. 2/3 is farther from 0 than 1/3. Predict, then count the jumps to check (predict-observe-explain).
Predict: on the same number line, which is FARTHER from 0, 2/8 or 1/8?	**2/8** — With the same bottom number, both use 1/8 jumps, so more jumps = farther. 2/8 is farther from 0 than 1/8. Predict, then count the jumps to check (predict-observe-explain).
Predict: on the same number line, which is FARTHER from 0, 3/8 or 1/8?	**3/8** — With the same bottom number, both use 1/8 jumps, so more jumps = farther. 3/8 is farther from 0 than 1/8. Predict, then count the jumps to check (predict-observe-explain).
Predict: on the same number line, which is FARTHER from 0, 3/8 or 1/8?	**3/8** — With the same bottom number, both use 1/8 jumps, so more jumps = farther. 3/8 is farther from 0 than 1/8. Predict, then count the jumps to check (predict-observe-explain).
On a number line from 0 to 1 split into 4 equal jumps, you land on the 3rd jump from 0. What number are you on?	**3/4** — From 0, each equal jump is 1/4. After 3 jumps you are at 3/4. On a number line a fraction is a NUMBER — a point — not just a piece of a shape.
Predict: on the same number line, which is FARTHER from 0, 4/8 or 1/8?	**4/8** — With the same bottom number, both use 1/8 jumps, so more jumps = farther. 4/8 is farther from 0 than 1/8. Predict, then count the jumps to check (predict-observe-explain).
Predict: on the same number line, which is FARTHER from 0, 3/6 or 1/6?	**3/6** — With the same bottom number, both use 1/6 jumps, so more jumps = farther. 3/6 is farther from 0 than 1/6. Predict, then count the jumps to check (predict-observe-explain).
On a number line from 0 to 1 split into 4 equal jumps, you land on the 2nd jump from 0. What number are you on?	**2/4** — From 0, each equal jump is 1/4. After 2 jumps you are at 2/4. On a number line a fraction is a NUMBER — a point — not just a piece of a shape.

On a number line from 0 to 1 split into 8 equal jumps, you land on the 6th jump from 0. What number are you on?	**6/8** — From 0, each equal jump is 1/8. After 6 jumps you are at 6/8. On a number line a fraction is a NUMBER — a point — not just a piece of a shape.
On a number line from 0 to 1 split into 6 equal jumps, you land on the 4th jump from 0. What number are you on?	**4/6** — From 0, each equal jump is 1/6. After 4 jumps you are at 4/6. On a number line a fraction is a NUMBER — a point — not just a piece of a shape.
Predict: on the same number line, which is FARTHER from 0, 5/6 or 1/6?	**5/6** — With the same bottom number, both use 1/6 jumps, so more jumps = farther. 5/6 is farther from 0 than 1/6. Predict, then count the jumps to check (predict-observe-explain).
Predict: on the same number line, which is FARTHER from 0, 1/3 or 2/3?	**2/3** — With the same bottom number, both use 1/3 jumps, so more jumps = farther. 2/3 is farther from 0 than 1/3. Predict, then count the jumps to check (predict-observe-explain).
On a number line from 0 to 1 split into 6 equal jumps, you land on the 2nd jump from 0. What number are you on?	**2/6** — From 0, each equal jump is 1/6. After 2 jumps you are at 2/6. On a number line a fraction is a NUMBER — a point — not just a piece of a shape.
On a number line from 0 to 1 split into 8 equal jumps, you land on the 7th jump from 0. What number are you on?	**7/8** — From 0, each equal jump is 1/8. After 7 jumps you are at 7/8. On a number line a fraction is a NUMBER — a point — not just a piece of a shape.
On a number line from 0 to 1 split into 8 equal jumps, you land on the 7th jump from 0. What number are you on?	**7/8** — From 0, each equal jump is 1/8. After 7 jumps you are at 7/8. On a number line a fraction is a NUMBER — a point — not just a piece of a shape.

8. Tiling & Area

✂ Question (fold →)	Answer
A rectangle is tiled with unit squares: 6 rows of 2 squares. What is its area in square units?	**12** — Tiling makes area a multiplication array: 6 × 2 = 12 square units. Area IS rows × columns — the same array Arlo builds, now covering a rectangle.
A rectangle is tiled with unit squares: 7 rows of 7 squares. What is its area in square units?	**49** — Tiling makes area a multiplication array: 7 × 7 = 49 square units. Area IS rows × columns — the same array Arlo builds, now covering a rectangle.
A rectangle is tiled with unit squares: 5 rows of 2 squares. What is its area in square units?	**10** — Tiling makes area a multiplication array: 5 × 2 = 10 square units. Area IS rows × columns — the same array Arlo builds, now covering a rectangle.
A rectangle is tiled with unit squares: 8 rows of 7 squares. What is its area in square units?	**56** — Tiling makes area a multiplication array: 8 × 7 = 56 square units. Area IS rows × columns — the same array Arlo builds, now covering a rectangle.
A rectangle is tiled with unit squares: 6 rows of 3 squares. What is its area in square units?	**18** — Tiling makes area a multiplication array: 6 × 3 = 18 square units. Area IS rows × columns — the same array Arlo builds, now covering a rectangle.
A rectangle is tiled with unit squares: 2 rows of 5 squares. What is its area in square units?	**10** — Tiling makes area a multiplication array: 2 × 5 = 10 square units. Area IS rows × columns — the same array Arlo builds, now covering a rectangle.
A rectangle is tiled with unit squares: 4 rows of 6 squares. What is its area in square units?	**24** — Tiling makes area a multiplication array: 4 × 6 = 24 square units. Area IS rows × columns — the same array Arlo builds, now covering a rectangle.
A rectangle is tiled with unit squares: 7 rows of 8 squares. What is its area in square units?	**56** — Tiling makes area a multiplication array: 7 × 8 = 56 square units. Area IS rows × columns — the same array Arlo builds, now covering a rectangle.
A rectangle is tiled with unit squares: 4 rows of 3 squares. What is its area in square units?	**12** — Tiling makes area a multiplication array: 4 × 3 = 12 square units. Area IS rows × columns — the same array Arlo builds, now covering a rectangle.
A rectangle is tiled with unit squares: 6 rows of 8 squares. What is its area in square units?	**48** — Tiling makes area a multiplication array: 6 × 8 = 48 square units. Area IS rows × columns — the same array Arlo builds, now covering a rectangle.
A rectangle is tiled with unit squares: 8 rows of 5 squares. What is its area in square units?	**40** — Tiling makes area a multiplication array: 8 × 5 = 40 square units. Area IS rows × columns — the same array Arlo builds, now covering a rectangle.
A rectangle is tiled with unit squares: 7 rows of 5 squares. What is its area in square units?	**35** — Tiling makes area a multiplication array: 7 × 5 = 35 square units. Area IS rows × columns — the same array Arlo builds, now covering a rectangle.
A rectangle is tiled with unit squares: 2 rows of 6 squares. What is its area in square units?	**12** — Tiling makes area a multiplication array: 2 × 6 = 12 square units. Area IS rows × columns — the same array Arlo builds, now covering a rectangle.

A rectangle is tiled with unit squares: 6 rows of 5 squares. What is its area in square units?	**30** — Tiling makes area a multiplication array: 6 × 5 = 30 square units. Area IS rows × columns — the same array Arlo builds, now covering a rectangle.
A rectangle is tiled with unit squares: 2 rows of 8 squares. What is its area in square units?	**16** — Tiling makes area a multiplication array: 2 × 8 = 16 square units. Area IS rows × columns — the same array Arlo builds, now covering a rectangle.
A rectangle is tiled with unit squares: 6 rows of 6 squares. What is its area in square units?	**36** — Tiling makes area a multiplication array: 6 × 6 = 36 square units. Area IS rows × columns — the same array Arlo builds, now covering a rectangle.
A rectangle is tiled with unit squares: 8 rows of 4 squares. What is its area in square units?	**32** — Tiling makes area a multiplication array: 8 × 4 = 32 square units. Area IS rows × columns — the same array Arlo builds, now covering a rectangle.
A rectangle is tiled with unit squares: 7 rows of 6 squares. What is its area in square units?	**42** — Tiling makes area a multiplication array: 7 × 6 = 42 square units. Area IS rows × columns — the same array Arlo builds, now covering a rectangle.
A rectangle is tiled with unit squares: 3 rows of 6 squares. What is its area in square units?	**18** — Tiling makes area a multiplication array: 3 × 6 = 18 square units. Area IS rows × columns — the same array Arlo builds, now covering a rectangle.
A rectangle is tiled with unit squares: 8 rows of 2 squares. What is its area in square units?	**16** — Tiling makes area a multiplication array: 8 × 2 = 16 square units. Area IS rows × columns — the same array Arlo builds, now covering a rectangle.

9. Area vs Perimeter

✂ Question (fold →)	Answer
To find how many unit squares of carpet cover a 6-by-8 room, do you need the area or the perimeter?	**Area** — Covering the floor needs AREA — the number of unit squares inside (6×8 = 48). Perimeter (28) would only tell you the length around the edge, like a fence, not the space covered.
To find how many unit squares of carpet cover a 4-by-4 room, do you need the area or the perimeter?	**Area** — Covering the floor needs AREA — the number of unit squares inside (4×4 = 16). Perimeter (16) would only tell you the length around the edge, like a fence, not the space covered.
A rectangle is 6 units tall and 5 units wide. What is its PERIMETER (distance all the way around)?	**22** — Perimeter is the distance around: 6+5+6+5 = 22 units. That's different from area (6×5=30 square units) — perimeter is a length around the edge, area is the tiles inside.
To find how many unit squares of carpet cover a 7-by-8 room, do you need the area or the perimeter?	**Area** — Covering the floor needs AREA — the number of unit squares inside (7×8 = 56). Perimeter (30) would only tell you the length around the edge, like a fence, not the space covered.
A rectangle is 7 units tall and 2 units wide. What is its PERIMETER (distance all the way around)?	**18** — Perimeter is the distance around: 7+2+7+2 = 18 units. That's different from area (7×2=14 square units) — perimeter is a length around the edge, area is the tiles inside.
A rectangle is 8 units tall and 2 units wide. What is its PERIMETER (distance all the way around)?	**20** — Perimeter is the distance around: 8+2+8+2 = 20 units. That's different from area (8×2=16 square units) — perimeter is a length around the edge, area is the tiles inside.
A rectangle is 3 units tall and 6 units wide. What is its PERIMETER (distance all the way around)?	**18** — Perimeter is the distance around: 3+6+3+6 = 18 units. That's different from area (3×6=18 square units) — perimeter is a length around the edge, area is the tiles inside.
A rectangle is 7 units tall and 4 units wide. What is its PERIMETER (distance all the way around)?	**22** — Perimeter is the distance around: 7+4+7+4 = 22 units. That's different from area (7×4=28 square units) — perimeter is a length around the edge, area is the tiles inside.
To find how many unit squares of carpet cover a 2-by-6 room, do you need the area or the perimeter?	**Area** — Covering the floor needs AREA — the number of unit squares inside (2×6 = 12). Perimeter (16) would only tell you the length around the edge, like a fence, not the space covered.
To find how many unit squares of carpet cover a 8-by-5 room, do you need the area or the perimeter?	**Area** — Covering the floor needs AREA — the number of unit squares inside (8×5 = 40). Perimeter (26) would only tell you the length around the edge, like a fence, not the space covered.
A rectangle is 7 units tall and 7 units wide. What is its PERIMETER (distance all the way around)?	**28** — Perimeter is the distance around: 7+7+7+7 = 28 units. That's different from area (7×7=49 square units) — perimeter is a length around the edge, area is the tiles inside.
To find how many unit squares of carpet cover a 4-by-8 room, do you need the area or the perimeter?	**Area** — Covering the floor needs AREA — the number of unit squares inside (4×8 = 32). Perimeter (24) would only tell you the length around the edge, like a fence, not the space covered.
A rectangle is 8 units tall and 4 units wide. What is its PERIMETER (distance all the way around)?	**24** — Perimeter is the distance around: 8+4+8+4 = 24 units. That's different from area (8×4=32 square units) — perimeter is a length around the edge, area is the tiles inside.

To find how many unit squares of carpet cover a 4-by-2 room, do you need the area or the perimeter?	**Area** — Covering the floor needs AREA — the number of unit squares inside (4×2 = 8). Perimeter (12) would only tell you the length around the edge, like a fence, not the space covered.
To find how many unit squares of carpet cover a 3-by-2 room, do you need the area or the perimeter?	**Area** — Covering the floor needs AREA — the number of unit squares inside (3×2 = 6). Perimeter (10) would only tell you the length around the edge, like a fence, not the space covered.
To find how many unit squares of carpet cover a 2-by-3 room, do you need the area or the perimeter?	**Area** — Covering the floor needs AREA — the number of unit squares inside (2×3 = 6). Perimeter (10) would only tell you the length around the edge, like a fence, not the space covered.
To find how many unit squares of carpet cover a 5-by-6 room, do you need the area or the perimeter?	**Area** — Covering the floor needs AREA — the number of unit squares inside (5×6 = 30). Perimeter (22) would only tell you the length around the edge, like a fence, not the space covered.
A rectangle is 5 units tall and 8 units wide. What is its PERIMETER (distance all the way around)?	**26** — Perimeter is the distance around: 5+8+5+8 = 26 units. That's different from area (5×8=40 square units) — perimeter is a length around the edge, area is the tiles inside.
A rectangle is 5 units tall and 3 units wide. What is its PERIMETER (distance all the way around)?	**16** — Perimeter is the distance around: 5+3+5+3 = 16 units. That's different from area (5×3=15 square units) — perimeter is a length around the edge, area is the tiles inside.
A rectangle is 6 units tall and 3 units wide. What is its PERIMETER (distance all the way around)?	**18** — Perimeter is the distance around: 6+3+6+3 = 18 units. That's different from area (6×3=18 square units) — perimeter is a length around the edge, area is the tiles inside.

10. Till It Pops

✂ Question (fold →)	Answer
18 ÷ 6 = ?	**3** — 18 ÷ 6 = 3 because 3 × 6 = 18. Every division fact rides on the multiplication fact you know — practice till it pops, never against a clock.
18 ÷ 2 = ?	**9** — 18 ÷ 2 = 9 because 9 × 2 = 18. Every division fact rides on the multiplication fact you know — practice till it pops, never against a clock.
2 × 3 = ?	**6** — 2 × 3 = 6. Fluent means it pops to mind — and if it doesn't yet, a strategy (skip-count or break-apart) always gets you there. No timer, no rush; a miss is just a friendly retry.
24 ÷ 3 = ?	**8** — 24 ÷ 3 = 8 because 8 × 3 = 24. Every division fact rides on the multiplication fact you know — practice till it pops, never against a clock.
7 × 10 = ?	**70** — 7 × 10 = 70. Fluent means it pops to mind — and if it doesn't yet, a strategy (skip-count or break-apart) always gets you there. No timer, no rush; a miss is just a friendly retry.
60 ÷ 10 = ?	**6** — 60 ÷ 10 = 6 because 6 × 10 = 60. Every division fact rides on the multiplication fact you know — practice till it pops, never against a clock.
8 ÷ 4 = ?	**2** — 8 ÷ 4 = 2 because 2 × 4 = 8. Every division fact rides on the multiplication fact you know — practice till it pops, never against a clock.
27 ÷ 9 = ?	**3** — 27 ÷ 9 = 3 because 3 × 9 = 27. Every division fact rides on the multiplication fact you know — practice till it pops, never against a clock.
4 × 8 = ?	**32** — 4 × 8 = 32. Fluent means it pops to mind — and if it doesn't yet, a strategy (skip-count or break-apart) always gets you there. No timer, no rush; a miss is just a friendly retry.
7 × 4 = ?	**28** — 7 × 4 = 28. Fluent means it pops to mind — and if it doesn't yet, a strategy (skip-count or break-apart) always gets you there. No timer, no rush; a miss is just a friendly retry.
56 ÷ 8 = ?	**7** — 56 ÷ 8 = 7 because 7 × 8 = 56. Every division fact rides on the multiplication fact you know — practice till it pops, never against a clock.
9 × 6 = ?	**54** — 9 × 6 = 54. Fluent means it pops to mind — and if it doesn't yet, a strategy (skip-count or break-apart) always gets you there. No timer, no rush; a miss is just a friendly retry.
5 × 6 = ?	**30** — 5 × 6 = 30. Fluent means it pops to mind — and if it doesn't yet, a strategy (skip-count or break-apart) always gets you there. No timer, no rush; a miss is just a friendly retry.
10 ÷ 2 = ?	**5** — 10 ÷ 2 = 5 because 5 × 2 = 10. Every division fact rides on the multiplication fact you know — practice till it pops, never against a clock.
18 ÷ 9 = ?	**2** — 18 ÷ 9 = 2 because 2 × 9 = 18. Every division fact rides on the multiplication fact you know — practice till it pops, never against a clock.
81 ÷ 9 = ?	**9** — 81 ÷ 9 = 9 because 9 × 9 = 81. Every division fact rides on the multiplication fact you know — practice till it pops, never against a clock.
10 × 2 = ?	**20** — 10 × 2 = 20. Fluent means it pops to mind — and if it doesn't yet, a strategy (skip-count or break-apart) always gets you there. No timer, no rush; a miss is just a friendly retry.
	40 — 10 × 4 = 40. Fluent means it pops to mind — and if it doesn't yet, a strategy (skip-count or break-

10 × 4 = ?	apart) always gets you there. No timer, no rush; a miss is just a friendly retry.
5 × 8 = ?	**40** — 5 × 8 = 40. Fluent means it pops to mind — and if it doesn't yet, a strategy (skip-count or break-apart) always gets you there. No timer, no rush; a miss is just a friendly retry.
6 × 2 = ?	**12** — 6 × 2 = 12. Fluent means it pops to mind — and if it doesn't yet, a strategy (skip-count or break-apart) always gets you there. No timer, no rush; a miss is just a friendly retry.

11. Workshop Mix

✂ Question (fold →)	Answer
You know 6 × 9 = 54. So 54 ÷ 9 = ?	**6** — 6, 9, and 54 are one fact family: 6 × 9 = 54 and 54 ÷ 9 = 6. Knowing the multiplication fact gives you the division fact free.
21 ÷ 7 = ?	**3** — 21 ÷ 7 = 3 because 3 × 7 = 21. Every division fact rides on the multiplication fact you know — practice till it pops, never against a clock.
Which break-apart helps you find 8 × 9 using easier facts?	**(5 × 9) + (3 × 9)** — Split 8 into 5 + 3, then multiply each part by 9: (5 × 9) + (3 × 9). Both parts use the same 9, and 45 + 27 = 72 = 8 × 9.
There are 3 baskets. Each basket holds 6 apples. How many apples in all?	**18** — 3 equal groups of 6 is 3 × 6 = 18. Building it as an array — 3 rows with 6 in each row — shows why: every row is the same, so you add 6 a total of 3 times.
A rectangle is tiled with unit squares: 7 rows of 2 squares. What is its area in square units?	**14** — Tiling makes area a multiplication array: 7 × 2 = 14 square units. Area IS rows × columns — the same array Arlo builds, now covering a rectangle.
There are 6 baskets. Each basket holds 8 apples. How many apples in all?	**48** — 6 equal groups of 8 is 6 × 8 = 48. Building it as an array — 6 rows with 8 in each row — shows why: every row is the same, so you add 8 a total of 6 times.
A rectangle is tiled with unit squares: 2 rows of 3 squares. What is its area in square units?	**6** — Tiling makes area a multiplication array: 2 × 3 = 6 square units. Area IS rows × columns — the same array Arlo builds, now covering a rectangle.
10 × 5 = ?	**50** — 10 × 5 = 50. Fluent means it pops to mind — and if it doesn't yet, a strategy (skip-count or break-apart) always gets you there. No timer, no rush; a miss is just a friendly retry.
You know 10 × 3 = 30. So 30 ÷ 3 = ?	**10** — 10, 3, and 30 are one fact family: 10 × 3 = 30 and 30 ÷ 3 = 10. Knowing the multiplication fact gives you the division fact free.
There are 7 baskets. Each basket holds 4 apples. How many apples in all?	**28** — 7 equal groups of 4 is 7 × 4 = 28. Building it as an array — 7 rows with 4 in each row — shows why: every row is the same, so you add 4 a total of 7 times.
To find 8 × 6, split it: (5 × 6) + (3 × 6) = 30 + 18 = ?	**48** — 8 × 6 = (5+3) × 6 = 30 + 18 = 48. Breaking a hard fact into two facts you already know is the break-apart strategy — it builds toward remembering the fact.
You know 10 × 5 = 50. So 50 ÷ 5 = ?	**10** — 10, 5, and 50 are one fact family: 10 × 5 = 50 and 50 ÷ 5 = 10. Knowing the multiplication fact gives you the division fact free.
Predict: on the same number line, which is FARTHER from 0, 3/6 or 1/6?	**3/6** — With the same bottom number, both use 1/6 jumps, so more jumps = farther. 3/6 is farther from 0 than 1/6. Predict, then count the jumps to check (predict-observe-explain).
There are 10 baskets. Each basket holds 6 apples. How many apples in all?	**60** — 10 equal groups of 6 is 10 × 6 = 60. Building it as an array — 10 rows with 6 in each row — shows why: every row is the same, so you add 6 a total of 10 times.
On a number line from 0 to 1 split into 4	**3/4** — From 0, each equal jump is 1/4. After 3 jumps you are at 3/4.

equal jumps, you land on the 3rd jump from 0. What number are you on?	On a number line a fraction is a NUMBER — a point — not just a piece of a shape.
On a number line from 0 to 1 split into 8 equal jumps, you land on the 1st jump from 0. What number are you on?	**1/8** — From 0, each equal jump is 1/8. After 1 jumps you are at 1/8. On a number line a fraction is a NUMBER — a point — not just a piece of a shape.
How many 1/2 pieces make one whole?	**2** — It takes 2 copies of 1/2 to make 1 whole: 2 × 1/2 = 2/2 = 1.
A whole strip is split into 8 equal parts. What fraction is ONE part?	**1/8** — When a whole is cut into 8 equal parts, each part is 1/8. The bottom number (8) tells how many equal parts make the whole; the top (1) says you have one of them.
How many 1/8 pieces make one whole?	**8** — It takes 8 copies of 1/8 to make 1 whole: 8 × 1/8 = 8/8 = 1.
To find 8 × 8, split it: (5 × 8) + (3 × 8) = 40 + 24 = ?	**64** — 8 × 8 = (5+3) × 8 = 40 + 24 = 64. Breaking a hard fact into two facts you already know is the break-apart strategy — it builds toward remembering the fact.

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