MINISTRIES FREE ACADEMY

Grade 3

Mathematics

Practice Workbook · Multiplication & Division

WEEKS 1–3

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A companion paper resource — nothing to log in to.

This workbook is optional and does not sync or count toward any record.

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How to Use This Workbook

This is a free, printable companion to the Grade 3 Mathematics course. Work the pages with a pencil at your own pace. Every answer is in the **Answer Key** at the back — check your work when you finish a page.

There is nothing to sign in to and nothing is tracked. This paper practice is entirely optional and is meant for extra review or screen-free learning. It does not replace or affect the on-screen course in any way.

What's inside — Weeks 1–3:

- Meaning of Multiplication
- Meaning of Division
- Word Problems

Name: _____ Grade / Class: _____ Date started: _____

WEEK 1 · DAY 1 3.OA.A.1

Equal Groups

Meaning of Multiplication — Understand multiplication as finding the total of equal groups.

LEARN

Multiplication is a fast way to add EQUAL groups. 3 groups of 4 means 4 + 4 + 4 = 12. We write it 3 x 4 = 12.

The first number is how many groups. The second is how many in each group. 2 groups of 5: 5 + 5 = 10, so 2 x 5 = 10.

Today you learned multiplication is equal groups:

- first number = how many groups;
- second number = how many in each;
- 3 x 4 = 4 + 4 + 4 = 12. Tomorrow: arrays.

1. **3 groups of 4 is how many in all?**

4 + 4 + 4.

(A) 7

(B) 9

(C) 12

(D) 16

2. **Which says '2 groups of 5'?**

Groups times size.

(A) 5 - 2

(B) 2 x 5

(C) 2 + 5

(D) 5 groups of 2 only

3. **Does multiplication add equal groups?**

Circle one: **YES** / **NO**

4. **2 groups of 5: 5 + 5 = ?**

Add the groups.

5 + 5 = _____

word bank: 10 · 7 · 25 · 12

5. **Match each 'groups of' to its total.**

Draw a line from each item on the left to its match on the right.

2 groups of 3 · · 10

3 groups of 4 · · 12

4 groups of 2 · · 6

5 groups of 2 · · 8

6. **4 groups of 3 is how many?**

3 + 3 + 3 + 3.

(A) 16

(B) 12

(C) 7

(D) 9

7. **In 3 x 4, does the 3 tell how many groups?**

Circle one: **YES** / **NO**

8. **3 groups of 2: 2 + 2 + 2 = ?**

Add the groups.

2 + 2 + 2 = _____

word bank: 6 · 5 · 8 · 32

9. **Sort each: equal groups (multiply), or not equal?**

Write each item under the correct heading.

items: 3 bags of 4 · 2 rows of 5 · a 2 and a 5 · 4 and then 6

EQUAL GROUPS	NOT EQUAL

10. **Which shows equal groups?**

Same in each group.

(A) 4 plus 3

(B) a pile of 7

(C) 3 plates with 4 cookies each

(D) one plate of 4 and one of 6

11. **Find the card that shows how many are in 5 groups of 2.**

Circle the correct one: [7] [52] [10] [12]

12. **What does multiplication do?**

Which idea?

(A) it counts backward from a big number to zero

(B) it splits a number into two unequal piles

(C) it adds up equal groups quickly to find the total

(D) it takes one number away from another number

13. **4 groups of 2 is written 4 x ?**

Size of each group.

4 x _____

word bank: 2 · 4 · 8 · 6

14. **Is 3 groups of 4 the same as 3 + 4?**

Circle one: **YES** / **NO**

15. **A box has 5 rows of 2 crayons. How many crayons?**

5 groups of 2.

(A) 12

(B) 7

(C) 3

(D) 10

16. **Circle the total for 3 equal groups of 5.**

5 + 5 + 5.

(A) 10

(B) 8

(C) 15

(D) 35

WEEK 1 · DAY 2 3.OA.A.1

Arrays

Meaning of Multiplication — Use rows and columns in an array to show multiplication.

LEARN

An ARRAY lines things up in equal rows. It shows multiplication. 3 rows of 4 dots is 3 x 4 = 12 dots.

Count the rows, then how many in each row. Multiply. An array with 2 rows of 5 is 2 x 5 = 10.

Today you used arrays:

- equal rows lined up;
- rows times the number in each row;
- 3 rows of 4 = 3 x 4 = 12. Tomorrow: multiplication and repeated addition.

1. **An array has 3 rows of 4. How many in all?**

3 x 4.

(A) 9

(B) 12

(C) 16

(D) 7

2. **An array with 2 rows of 5 shows which fact?**

Rows times each row.

(A) 2 x 2

(B) 5 - 2

(C) 2 + 5

(D) 2 x 5

3. **Does an array have equal rows?**

Circle one: **YES** / **NO**

4. **An array of 4 rows of 3 is 4 x 3 = ?**

Multiply.

4 x 3 = _____

word bank: 12 · 7 · 9 · 43

5. **Match each array to its total.**

Draw a line from each item on the left to its match on the right.

2 rows of 4 · · 9

3 rows of 3 · · 16

5 rows of 2 · · 8

4 rows of 4 · · 10

6. **An array has 5 rows of 3. How many in all?**

5 x 3.

(A) 8

(B) 12

(C) 15

(D) 53

7. **Match each multiplication fact to its product.**

Draw a line from each item on the left to its match on the right.

3 x 4 · · 12

2 x 5 · · 16

4 x 4 · · 10

5 x 3 · · 15

8. **An array of 2 rows of 6 is 2 x 6 = ?**

Multiply.

2 x 6 = _____

word bank: 12 · 8 · 26 · 10

9. **Sort each: an array (equal rows), or not?**

Write each item under the correct heading.

items: 3 even rows of 4 · 2 even rows of 5 · a messy pile · rows of 3 then 5

AN ARRAY	NOT AN ARRAY

10. **Which is an array for 4 x 2?**

4 rows of 2.

(A) one row of 8

(B) 4 plus 2 dots

(C) 2 piles of 4 and 5

(D) 4 rows of 2 dots

11. **Does a 3 by 4 array have the same total as a 4 by 3 array?**

Circle one: **YES** / **NO**

12. **How do you find the total in an array?**

Which idea?

(A) count only one single row and call that the total

(B) add together just the first row and the last row only

(C) subtract the number of rows from the number in a row

(D) multiply the number of rows by how many are in each row

13. **3 rows of 5 is written 3 x ?**

Number in each row.

3 x _____

word bank: 5 · 3 · 15 · 8

14. **Does a 2 by 5 array have 7 dots?**

Circle one: **YES** / **NO**

15. **Chairs are set in 4 rows of 5. How many chairs?**

4 x 5.

(A) 9

(B) 12

(C) 20

(D) 45

16. **An array has 3 rows of 6. How many in all?**

3 x 6.

(A) 18

(B) 9

(C) 36

(D) 12

WEEK 1 · DAY 3

3.OA.A.1

Repeated Addition

Meaning of Multiplication — Connect multiplication to repeated addition and skip counting.

LEARN

Multiplication is repeated addition. 4 x 3 means add 3 four times. 3 + 3 + 3 + 3 = 12, so 4 x 3 = 12.

You can also skip count. For 4 x 3, count by 3: 3, 6, 9, 12. Either way you land on the product.

Today you connected multiplication and addition:

- 4 x 3 means add 3 four times;
- skip counting lands on the product;
- 3 + 3 + 3 + 3 = 12. Tomorrow: multiplication word problems.

1. **Which addition matches 4 x 3?**

Add 3 four times.

(A) 3 + 3 + 3

(B) 4 + 4 + 4

(C) 3 + 3 + 3 + 3

(D) 3 + 4

2. **Skip count by 5 three times: 5, 10, ?**

Add 5 more.

(A) 20

(B) 8

(C) 12

(D) 15

3. **Is multiplication the same as repeated addition?**

Circle one: **YES** / **NO**

4. **4 x 2 = 2 + 2 + 2 + 2 = ?**

Add 2 four times.

2 + 2 + 2 + 2 = _____

word bank: 8 · 6 · 10 · 42

5. **Match each fact to its repeated addition.**

Draw a line from each item on the left to its match on the right.

3 x 4	6 + 6
2 x 6	4 + 4 + 4
4 x 5	5 + 5 + 5 + 5
3 x 2	2 + 2 + 2

6. **Skip count by 2 five times: 2, 4, 6, 8, ?**

Add 2 more.

- (A) 9
- (B) 12
- (C) 10
- (D) 11

7. **For 3 x 5, do you add 5 just one time?**

Circle one: **YES** / **NO**

8. **Skip count by 4: 4, 8, ?**

Add 4 more.

4, 8, _____

word bank: 12 · 10 · 16 · 6

9. **Sort each: matches 3 x 4, or does not?**

Write each item under the correct heading.

items: 4 + 4 + 4 · skip count 4, 8, 12 · 3 + 4 · 4 + 4

MATCHES 3 X 4	DOES NOT

10. **5 + 5 + 5 is the same as which fact?**

Three 5s.

- (A) 3 x 5
- (B) 3 + 5
- (C) 2 x 5
- (D) 5 x 5

11. **Put the skip count by 5 in order, smallest first.**

5, then 10, and so on.

Number these from 1 to 4 in the correct order.

- [ ] 5
- [ ] 20
- [ ] 15
- [ ] 10

12. **What does 4 x 3 mean?**

Which idea?

(A) add the number 4 and the number 3 together one time

(B) count up from 4 all the way to the number 3

(C) add the number 3 four separate times to get the total

(D) take 3 away from 4 to find the difference

13. **6 + 6 + 6 = ? (which is 3 x 6)**

Add three 6s.

6 + 6 + 6 = _____

word bank: 18 · 12 · 16 · 36

14. **Is 3 x 4 equal to 7?**

Circle one: **YES** / **NO**

15. **You save 5 dollars each week for 4 weeks. How much in all?**

4 x 5.

(A) 15

(B) 9

(C) 45

(D) 20

16. **Which fact matches 4 + 4 + 4 + 4 + 4?**

How many 4s?

(A) 4 + 5

(B) 5 x 5

(C) 5 x 4

(D) 4 x 4

WEEK 1 · DAY 4

3.OA.A.1, 3.OA.A.3

Multiplication Stories

Meaning of Multiplication — Solve word problems about equal groups using multiplication.

LEARN

Word problems often have equal groups. Find how many groups and how many in each, then multiply. 4 bags with 3 apples each: 4 x 3 = 12 apples.

Read carefully. Look for 'each' - it tells you the group size. 5 boxes with 2 toys each: 5 x 2 = 10 toys.

Today you solved multiplication stories:

- look for equal groups and the word 'each';
- multiply groups by size. Tomorrow is the Week 1 check.

1. **4 bags have 3 apples each. How many apples?**

4 x 3.

(A) 16

(B) 7

(C) 9

(D) 12

2. **5 boxes have 2 toys each. How many toys?**

5 x 2.

(A) 10

(B) 7

(C) 12

(D) 3

3. **Does the word 'each' help tell the size of a group?**

Circle one: **YES** / **NO**

4. **3 plates with 5 grapes each: 3 x 5 = ?**

Multiply.

3 x 5 = _____

word bank: 15 · 8 · 12 · 35

5. **Match each story to its total.**

Draw a line from each item on the left to its match on the right.

2 cars, 4 wheels each	· ·	15
3 hands, 5 fingers each	· ·	12
4 nests, 3 eggs each	· ·	10
5 bags, 2 nuts each	· ·	8

6. **3 cars have 4 wheels each. How many wheels?**

3 x 4.

(A) 7
(B) 16
(C) 9
(D) 12

7. **For '4 bags of 3 apples', do you add 4 and 3 to get 7?**

Circle one: **YES** / **NO**

8. **4 rows of 6 seats: 4 x 6 = ?**

Multiply.

4 x 6 = _____

word bank: 24 · 10 · 18 · 46

9. **Sort each story: multiply, or just add?**

Write each item under the correct heading.

items: 3 boxes of 4 each · 5 jars of 2 each · 4 red and 3 blue, in all · 6 here and 2 more

MULTIPLY	ADD

10. **4 nests have 3 eggs each. How many eggs?**

4 x 3.

(A) 16
(B) 7
(C) 12
(D) 9

11. **Find the total: 6 bags have 2 plums each.**

Circle the correct one: [62] [12] [10] [8]

12. **How do you solve an equal-groups story?**

Which idea?

(A) multiply the number of groups by how many are in each group

(B) add the number of groups to the size of one of the groups

(C) subtract the group size from the number of groups you have

(D) count just one group and use that as the whole answer

13. **2 hands with 5 fingers each: 2 x 5 = ?**

Multiply.

2 x 5 = _____

word bank: 10 · 7 · 25 · 12

14. **Is '5 boxes of 2 toys' the same as 7 toys?**

Circle one: **YES** / **NO**

15. **A baker puts 3 buns in each of 6 bags. How many buns in all?**

6 x 3.

(A) 18

(B) 63

(C) 12

(D) 9

16. **2 boxes hold 6 markers each. How many markers in all?**

2 x 6.

(A) 26

(B) 8

(C) 12

(D) 18

WEEK 1 · DAY 5

3.OA.A.1

Week 1 Mastery Check

Meaning of Multiplication — Show mastery of multiplication as equal groups, arrays, and repeated addition.

LEARN

This week you learned multiplication: equal groups, arrays, and repeated addition. First a few warm-ups, then the graded check.

Remember:

- multiplication adds equal groups;
- an array is equal rows;
- 4 x 3 means add 3 four times = 12.

You understand multiplication: equal groups, arrays, and repeated addition. Next week: what division means.

1. **3 groups of 4 is how many?**

4 + 4 + 4.

(A) 9
(B) 16
(C) 12
(D) 7

2. **An array has 2 rows of 5. How many in all?**

2 x 5.

(A) 12
(B) 25
(C) 7
(D) 10

3. **Does multiplication add equal groups?**

Circle one: **YES** / **NO**

4. **Is 3 groups of 4 the same as 3 + 4?**

Circle one: **YES** / **NO**

5. **4 x 2 = 2 + 2 + 2 + 2 = ?**

Add four 2s.

2 + 2 + 2 + 2 = _____

word bank: 8 · 6 · 10 · 42

6. Match each fact to its product.

Draw a line from each item on the left to its match on the right.

4 x 3	10
2 x 5	12
3 x 3	9

7. 4 bags have 3 apples each. How many apples?

4 x 3.

- (A) 9
- (B) 16
- (C) 7
- (D) 12

8. Skip count by 5 three times: 5, 10, ?

Add 5.

- (A) 8
- (B) 12
- (C) 15
- (D) 20

WEEK 1 MASTERY CHECK. ANSWER ALL 6.

9. 4 groups of 3 is how many?

- (A) 9
- (B) 7
- (C) 12
- (D) 16

10. An array has 3 rows of 4. How many in all?

- (A) 9
- (B) 12
- (C) 7
- (D) 16

11. Which addition matches 4 x 3?

- (A) 4 + 4 + 4 + 4 + 4
- (B) 3 + 4
- (C) 3 + 3 + 3 + 3
- (D) 3 + 3 + 3

12. **What does multiplication do?**

(A) adds equal groups to find a total

(B) takes one number away from another number to find how much is left over

(C) splits one number into two piles that are not the same size at all

(D) counts backward from a big number down to zero one step at a time

13. **5 boxes have 2 toys each. How many toys?**

(A) 7

(B) 3

(C) 12

(D) 10

14. **A baker puts 3 buns in each of 6 bags. How many buns in all?**

(A) 9

(B) 18

(C) 12

(D) 63

WEEK 2 · DAY 1 3.OA.A.2

Sharing Equally

Meaning of Division — Understand division as sharing a total equally among a known number of groups to find the size of each group.

LEARN

Last week you put equal groups together with multiplication. This week you take them apart with DIVISION. Division means splitting a total into EQUAL groups. One way to divide is to SHARE: you know how many groups, and you find how many go in each. 12 cookies shared on 3 plates: each plate gets 4. We write 12 divided by 3 = 4.

To share equally, deal one to each group, then go around again, until they are gone. 6 apples for 2 kids: one for you, one for me, again and again. Each kid ends with 3. 6 divided by 2 = 3. Fair shares means every group gets the SAME amount.

When you share, the FIRST number is the total, and you split it by the NUMBER OF GROUPS. 12 divided by 3: the 12 is the total, the 3 is the number of plates, and the answer 4 is how many on EACH plate. The answer tells the size of one group.

Today you learned division as SHARING:

- split a total into a known number of equal groups;
- the answer is how many in each group;
- more groups means a smaller share. Tomorrow: dividing by making groups of a set size.

1. **12 stickers shared on 3 pages. How many on each page?**

Deal them out evenly.

(A) 6
(B) 3
(C) 9
(D) 4

2. **10 grapes shared by 2 kids. How many does each get?**

Split into 2 equal groups.

(A) 4
(B) 12
(C) 5
(D) 8

3. **In division, does every group get an equal share?**

Circle one: **YES** / **NO**

4. **8 toys shared on 4 shelves. How many per shelf?**

8 divided by 4.

8 divided by 4 = _____

word bank: 2 · 3 · 6 · 12

5. **Match each sharing story to how many each group gets.**

Draw a line from each item on the left to its match on the right.

6 on 2 plates	· ·	4
12 on 4 plates	· ·	5
15 on 3 plates	· ·	3
8 on 2 plates	· ·	3

6. **9 crayons shared by 3 kids. How many each?**

9 divided by 3.

- (A) 3
- (B) 6
- (C) 2
- (D) 4

7. **If one plate gets 5 and another gets 3, is that a fair share?**

Circle one: **YES** / **NO**

8. **20 books shared on 5 carts. How many per cart?**

20 divided by 5.

20 divided by 5 = _____

word bank: 4 · 5 · 10 · 15

9. **Each total is shared by 2 kids. Sort by how many each kid gets.**

Write each item under the correct heading.

items: 8 shared by 2 · 10 shared by 2 · share 8 candies · share 10 candies

4 EACH	5 EACH

10. **16 marbles shared by 4 kids. How many each?**

16 divided by 4.

- (A) 5
- (B) 8
- (C) 4
- (D) 3

11. **In '15 divided by 5 = 3', what does the 3 tell you?**

Sharing into 5 groups.

- (A) The number of groups
- (B) How many in each group
- (C) The total
- (D) How many are left over

12. **Find how many each kid gets: 16 marbles shared by 4 kids.**

Circle the correct one: [4] [12] [3] [6]

13. **What does it mean to share 12 equally on 4 plates?**

Which idea?

- (A) put all twelve onto just one of the four plates and leave the rest empty
- (B) give each of the 4 plates the same number until the 12 are gone
- (C) add 12 and 4 together to find how many plates you need
- (D) take 4 away from 12 to see how many cookies are left over

14. **A teacher shares 18 pencils equally among 3 tables. How many pencils per table?**

18 divided by 3.

- (A) 15
- (B) 9
- (C) 5
- (D) 6

15. **If you share 10 cookies on 5 plates, does each plate get 5 cookies?**

Circle one: **YES** / **NO**

16. **15 stickers are shared equally onto 3 plates. How many on each plate?**

15 divided by 3.

- (A) 3
- (B) 5
- (C) 6
- (D) 12

Making Equal Groups

Meaning of Division — Understand division as splitting a total into groups of a known size to find the number of groups.

LEARN

Yesterday you knew the number of groups and found the size of each. Today is the OTHER kind of dividing. Now you know the SIZE of each group, and you find HOW MANY groups you can make. 12 cookies, 4 in each bag: how many bags? 3 bags. We write 12 divided by 4 = 3.

Keep pulling out a group of the same size until the total is gone. Count how many groups you made. 10 socks, 2 to a pair: pull out 2, 2, 2, 2, 2 - that is 5 pairs. 10 divided by 2 = 5. The answer is the NUMBER of groups.

Both kinds of dividing use the same sign. Yesterday: you knew the number of groups. Today: you know the size of each group. 12 divided by 4 can mean 'share onto 4 plates' (4 each) OR 'make groups of 4' (4 groups). Either way, the answer to 12 divided by 4 is the same number.

Today you divided by MAKING GROUPS:

- you know the size of each group;
- the answer is how many groups;
- smaller groups means more groups. Tomorrow: the division symbol and how to read it.

1. **12 eggs packed 3 to a box. How many boxes?**

Make groups of 3.

(A) 6
(B) 3
(C) 4
(D) 9

2. **10 students sit 5 to a bench. How many benches?**

Make groups of 5.

(A) 2
(B) 50
(C) 5
(D) 15

3. **In this kind of division, does the answer tell the NUMBER of groups?**

Circle one: **YES** / **NO**

4. **8 wheels, 4 on each cart. How many carts?**

8 divided by 4.

8 divided by 4 = _____

word bank: 2 · 3 · 6 · 12

5. **Match each story to how many groups you can make.**

Draw a line from each item on the left to its match on the right.

6 made into 2s	· ·	3
12 made into 6s	· ·	3
15 made into 5s	· ·	2
8 made into 2s	· ·	4

6. **9 flowers, 3 in each vase. How many vases?**

Make groups of 3.

- (A) 6
- (B) 9
- (C) 2
- (D) 3

7. **If you make groups of 4 from 12, will any be left over?**

Circle one: **YES** / **NO**

8. **20 chairs set 5 to a row. How many rows?**

20 divided by 5.

20 divided by 5 = _____

word bank: 4 · 5 · 10 · 15

9. **Each total is made into groups of 3. Sort by how many groups.**

Write each item under the correct heading.

items: 9 into 3s · 12 into 3s · make 3s from 9 · make 3s from 12

3 GROUPS	4 GROUPS

10. **16 markers, 4 to a pack. How many packs?**

16 divided by 4.

- (A) 3
- (B) 8
- (C) 12
- (D) 4

11. **In 'make groups of 2 from 10', what does the answer 5 tell you?**

Groups of 2.

- (A) The size of each group
- (B) The total to start with
- (C) How many groups you made
- (D) How many are left over

12. **Match each division to how many groups it makes.**

Draw a line from each item on the left to its match on the right.

12 divided by 3	4
10 divided by 5	2
15 divided by 3	5
18 divided by 6	3

13. **What does '15 made into groups of 5' ask you to find?**

Which idea?

- (A) what number you add to 5 in order to reach the total of 15
- (B) how much is left behind after you take a single group of 5
- (C) how many equal groups of 5 you can pull out of the fifteen
- (D) the total you would have if you put all the groups back together

14. **A baker boxes 18 muffins, 6 in each box. How many boxes?**

18 divided by 6.

- (A) 2
- (B) 4
- (C) 12
- (D) 3

15. **If you make groups of 5 from 20, do you get 5 groups?**

Circle one: **YES** / **NO**

16. **18 counters are put into groups of 3. How many groups are there?**

18 divided by 3.

- (A) 15
- (B) 9
- (C) 6
- (D) 3

Reading Division

Meaning of Division — Write and read division with the division symbol, naming the total, the number of groups or group size, and the answer.

LEARN

You have divided two ways: sharing into groups, and making groups of a size. Today you learn to WRITE division. The sign is the division symbol. 12 divided by 3 means 'split 12 into 3' and the answer is 4. The FIRST number is the total. The SECOND number is the groups or the group size.

Always write the TOTAL first, then the number you split by. Share 10 onto 2 plates: write 10 divided by 2 = 5. Make groups of 2 from 10: also write 10 divided by 2 = 5. The total to be split always comes first.

Every division has three numbers with a job:

- the TOTAL (the number you split);
- the number you split BY (groups or group size);
- the ANSWER (how many in each group, or how many groups). In 20 divided by 5 = 4: 20 is the total, 5 is the number you split by, 4 is the answer.

Today you learned to write and read division:

- the total comes first;
- then the number you split by;
- the answer is the size or the number of groups;
- order matters, so you cannot swap the numbers. Tomorrow: division stories.

1. **You split 12 into 4. Which number do you write FIRST?**

Total first.

(A) 4
(B) 12
(C) 16
(D) 3

2. **What is 15 divided by 3?**

Split 15 into 3 equal groups.

(A) 5
(B) 18
(C) 3
(D) 12

3. **Is the total always written first in a division?**

Circle one: **YES** / **NO**

4. **Write the division for: 14 shared into 2 equal groups.**

Total first.

14 divided by 2 = _____

word bank: 7 · 6 · 12 · 28

5. **Match each division to its answer.**

Draw a line from each item on the left to its match on the right.

12 divided by 2	3
12 divided by 3	4
12 divided by 4	6
12 divided by 6	2

6. **In '20 divided by 4 = 5', which number is the TOTAL?**

What got split?

(A) 20

(B) 5

(C) 4

(D) 9

7. **Is 12 divided by 3 the same as 3 divided by 12?**

Circle one: **YES** / **NO**

8. **What is 18 divided by 2?**

Split 18 into 2.

18 divided by 2 = _____

word bank: 9 · 8 · 16 · 20

9. **Sort each division by its answer.**

Write each item under the correct heading.

items: 9 divided by 3 · 12 divided by 3 · 15 divided by 5 · 16 divided by 4

ANSWER IS 3	ANSWER IS 4

10. **What is 24 divided by 4?**

Split 24 into 4 equal groups.

- (A) 20
- (B) 8
- (C) 6
- (D) 5

11. **In '18 divided by 6 = 3', which number is the ANSWER?**

The result of dividing.

- (A) 12
- (B) 18
- (C) 6
- (D) 3

12. **Order these by their answer, smallest first.**

Work out each quotient, then put them in order.

Number these from 1 to 3 in the correct order.

- ☐ 24 divided by 4
- ☐ 18 divided by 2
- ☐ 15 divided by 3

13. **What does the first number in a division always tell you?**

Which idea?

- (A) the whole total amount that you are going to split into equal groups
- (B) the number of pieces that will be left over once you finish
- (C) how many separate equal groups you are going to end up making
- (D) the size that each one of the equal groups is going to be

14. **A class of 21 students forms teams of 3. Which division finds the number of teams?**

Total first.

- (A) 21 divided by 7
- (B) 21 divided by 3
- (C) 21 + 3
- (D) 3 divided by 21

15. **Does 16 divided by 4 equal 8?**

Circle one: **YES** / **NO**

16. **Which shows '8 crackers shared equally by 2 people'?**

Total first, then divide.

(A) 8 ÷ 2

(B) 8 - 2

(C) 2 ÷ 8

(D) 8 x 2

WEEK 2 · DAY 4 3.OA.A.2

Division Stories

Meaning of Division — Solve word problems by deciding whether to share into equal groups or make groups of a set size, then divide.

LEARN

Division stories split a total into equal groups. Two clues tell you what to find:

- if you know the NUMBER of groups, find how many in each (sharing);
- if you know the SIZE of each group, find how many groups. Either way, you divide the total.

Find the total and what you split by. '12 books on 3 shelves' - you know 3 shelves, so share: 12 divided by 3 = 4 on each. '12 books, 4 to a shelf' - you know 4 each, so group: 12 divided by 4 = 3 shelves.

Both kinds of story divide the total. The clue is what you already KNOW:

- know the number of groups -> share to find the size of each;
- know the size of each group -> group to find how many groups. Either way, write the total first and divide.

Today you solved division stories:

- find the total and what you split by;
- share when you know the number of groups;
- make groups when you know the size;
- either way, divide. Tomorrow is the Week 2 check.

1. **15 apples shared into 5 baskets. How many apples per basket?**

15 divided by 5.

(A) 20

(B) 5

(C) 3

(D) 10

2. **14 socks, 2 to a pair. How many pairs?**

14 divided by 2.

(A) 6

(B) 7

(C) 16

(D) 12

3. **Do division stories always split into EQUAL groups?**

Circle one: **YES** / **NO**

4. **18 crayons shared by 3 kids. How many each?**

18 divided by 3.

18 divided by 3 = _____

word bank: 6 · 5 · 9 · 21

5. **Match each story to its answer.**

Draw a line from each item on the left to its match on the right.

10 split onto 2 plates	· ·	4
12 split into 4s	· ·	3
16 shared by 4	· ·	4
20 made into 5s	· ·	5

6. **A toy maker has 12 wheels and puts 4 on each car. How many cars?**

12 divided by 4.

(A) 3

(B) 6

(C) 8

(D) 2

7. **For '12 cookies shared by 3 kids', do you add 12 and 3 to get 15?**

Circle one: **YES** / **NO**

8. **24 stickers, 6 to a sheet. How many sheets?**

24 divided by 6.

24 divided by 6 = _____

word bank: 4 · 3 · 6 · 18

9. **Sort each story: divide, or just add?**

Write each item under the correct heading.

items: 12 shared by 3 kids · 20 split into 4 rows · 4 red and 5 blue in all · 6 here and 3 more

DIVIDE	ADD

10. **16 players form teams of 4. How many teams?**

16 divided by 4.

- (A) 3
- (B) 8
- (C) 12
- (D) 4

11. **'20 grapes, 5 to a cup.' What are you finding?**

You know the group size.

- (A) how many grapes are left
- (B) the total number of grapes
- (C) how many cups
- (D) the size of each cup

12. **Find the answer: 16 players form teams of 4. How many teams?**

Circle the correct one: [8] [4] [12] [3]

13. **How do you solve a story that splits a total into equal groups?**

Which idea?

- (A) divide the total by the number of groups or by the size of each group
- (B) add the two numbers in the story together to find the grand total amount
- (C) subtract the smaller number in the story away from the larger number
- (D) multiply the two numbers in the story to make the total even bigger

14. **A gardener plants 18 seeds in rows of 6. How many rows?**

18 divided by 6.

- (A) 12
- (B) 4
- (C) 3
- (D) 2

15. **If 15 marbles are shared by 5 kids, does each kid get 5 marbles?**

Circle one: **YES** / **NO**

16. **12 stickers are shared equally by 2 friends. How many does each get?**

12 divided by 2.

(A) 5
(B) 6
(C) 4
(D) 10

WEEK 2 · DAY 5 3.OA.A.2

Week 2 Mastery Check

Meaning of Division — Show mastery of division as sharing equally and as making equal groups.

LEARN

This week you learned division: sharing a total into equal groups, and making groups of a size. First a few warm-ups, then the graded check.

Remember:

- division splits a total into EQUAL groups;
- know the number of groups? share to find the size of each;
- know the size? make groups to find how many;
- the total is written first.

You understand division: sharing equally and making equal groups. Next week: multiplication and division word problems together.

1. **12 shared on 4 plates. How many per plate?**

12 divided by 4.

(A) 3
(B) 6
(C) 16
(D) 8

2. **10 made into groups of 2. How many groups?**

10 divided by 2.

(A) 12
(B) 4
(C) 8
(D) 5

3. **Does division make equal groups?**

Circle one: **YES** / **NO**

4. **Is 12 divided by 3 the same as 3 divided by 12?**

Circle one: **YES** / **NO**

5. **15 shared by 3 kids. How many each?**

15 divided by 3.

15 divided by 3 = _____

word bank: 5 · 4 · 6 · 12

6. **In '20 divided by 4 = 5', which number is the total?**

What got split?

(A) 9

(B) 5

(C) 20

(D) 4

7. **Order these by their answer, smallest first.**

Work out each quotient, then put them in order.

Number these from 1 to 3 in the correct order.

☐ 20 divided by 5

☐ 12 divided by 2

☐ 16 divided by 2

8. **Match each division to its answer.**

Draw a line from each item on the left to its match on the right.

18 divided by 2 · · 6

18 divided by 3 · · 9

18 divided by 6 · · 3

WEEK 2 MASTERY CHECK. ANSWER ALL 6.

9. **12 stickers shared on 3 pages. How many per page?**

(A) 6

(B) 9

(C) 3

(D) 4

10. **15 made into groups of 5. How many groups?**

(A) 20

(B) 3

(C) 5

(D) 10

11. **What does the first number in a division tell you?**

- (A) the whole total being split into groups
- (B) how many are left over at the very end
- (C) the size that each one of the equal groups turns out to be
- (D) the number of groups you end up making

12. **Does division always make equal groups?**

Circle one: **YES** / **NO**

13. **In '24 divided by 6 = 4', which number is the answer?**

- (A) 24
- (B) 4
- (C) 10
- (D) 6

14. **A teacher seats 21 students in rows of 3. How many rows?**

- (A) 7
- (B) 8
- (C) 18
- (D) 6

Multiplication Word Problems

Word Problems — Solve word problems with equal groups, arrays, and measurement by multiplying.

LEARN

A word problem is a math story. When a story has EQUAL GROUPS, you multiply. Find two things: how many groups, and how many in each. Then multiply. 5 baskets with 3 apples each: 5 x 3 = 15 apples.

The word 'each' or 'every' often points to the group size. '4 boxes with 6 crayons each' tells you 4 groups of 6. 4 x 6 = 24 crayons. Draw the groups if it helps you see them.

If a story is tricky, draw the groups. Make 4 circles and put 6 dots in each, then count or multiply. A picture turns words into a multiplication you can see: 4 x 6 = 24.

Today you solved multiplication stories:

- look for equal groups and the word 'each';
- multiply groups by size;
- draw the groups if it helps. Tomorrow: stories that divide.

1. **6 bags hold 2 oranges each. How many oranges?**

6 x 2.

(A) 8
(B) 12
(C) 10
(D) 4

2. **Chairs are in 4 rows of 5. How many chairs?**

4 x 5.

(A) 20
(B) 9
(C) 16
(D) 25

3. **Do you multiply when a story has equal groups?**

Circle one: **YES** / **NO**

4. **3 plates with 6 grapes each. How many grapes?**

3 x 6.

3 x 6 = _____

word bank: 18 · 9 · 12 · 36

5. **Match each story to its total.**

Draw a line from each item on the left to its match on the right.

2 rows of 7	· ·	12
3 bags of 4	· ·	10
5 cups of 2	· ·	16
4 boxes of 4	· ·	14

6. **Each ribbon is 5 inches long. How long are 3 ribbons end to end?**

3 x 5.

- (A) 10
- (B) 15
- (C) 20
- (D) 8

7. **For '5 boxes with 3 toys each', do you add 5 and 3 to get 8?**

Circle one: **YES** / **NO**

8. **7 nests with 2 eggs each. How many eggs?**

7 x 2.

7 x 2 = _____

word bank: 14 · 9 · 12 · 21

9. **Sort each story: multiply, or just add?**

Write each item under the correct heading.

items: 4 jars of 3 each · 6 rows of 2 each · 3 red and 4 blue in all · 5 here and 2 more

MULTIPLY	ADD

10. **A garden has 5 rows of 4 plants. How many plants?**

5 x 4.

- (A) 20
- (B) 9
- (C) 16
- (D) 25

11. **You drew 3 circles with 5 dots in each. What multiplication is that?**

Groups x size.

(A) 5 - 3

(B) 3 x 5

(C) 3 + 5

(D) 5 x 5

12. **Find the total: a garden has 5 rows of 4 plants.**

Circle the correct one: 25 20 9 16

13. **How do you solve a story with equal groups?**

Which idea?

(A) multiply the number of groups by how many are in each group

(B) add the number of groups to the size of one single group

(C) count only one of the groups and use that number as the whole answer

(D) take the size of a group away from the number of groups you have

14. **A library cart has 6 shelves with 5 books each. How many books?**

6 x 5.

(A) 36

(B) 25

(C) 11

(D) 30

15. **Does '4 rows of 5' equal 9 chairs?**

Circle one: **YES** / **NO**

16. **5 cups hold 4 spoons each. How many spoons in all?**

5 x 4.

(A) 15

(B) 9

(C) 20

(D) 54

Division Word Problems

Word Problems — Solve word problems by dividing a total into equal groups, choosing sharing or grouping.

LEARN

When a story splits a total into EQUAL groups, you divide. Find the total, then what you split by. Two kinds:

- share onto a known number of groups;
- make groups of a known size. 15 apples shared on 3 plates: 15 divided by 3 = 5 each.

Write the total first, then divide. '12 cookies, 3 to a bag' tells you the group size is 3. Make groups: 12 divided by 3 = 4 bags. Draw and deal them out if it helps you see it.

If a division story is tricky, draw the groups and deal one at a time. 12 onto 3 plates: deal around until 12 are gone. Each plate ends with 4. A picture turns the words into 12 divided by 3 = 4.

Today you solved division stories:

- find the total and what you split by;
- share or make groups;
- draw and deal if it helps. Tomorrow: deciding whether to multiply or divide.

1. **12 grapes shared by 4 kids. How many each?**

12 divided by 4.

(A) 4
(B) 8
(C) 3
(D) 2

2. **15 socks, 3 to a bundle. How many bundles?**

15 divided by 3.

(A) 18
(B) 12
(C) 3
(D) 5

3. **Do you divide when a story splits a total into equal groups?**

Circle one: **YES** / **NO**

4. **20 books shared on 4 shelves. How many per shelf?**

20 divided by 4.

20 divided by 4 = _____

word bank: 5 · 4 · 6 · 16

5. **Match each story to its answer.**

Draw a line from each item on the left to its match on the right.

14 shared by 2	· ·	4
18 split onto 3 plates	· ·	6
16 made into 4s	· ·	5
10 made into 2s	· ·	7

6. **A 12-inch ribbon is cut into 4-inch pieces. How many pieces?**

12 divided by 4.

(A) 6
(B) 3
(C) 2
(D) 8

7. **For '12 cookies shared by 4 kids', do you add 12 and 4 to get 16?**

Circle one: **YES** / **NO**

8. **24 crayons, 6 to a box. How many boxes?**

24 divided by 6.

24 divided by 6 = _____

word bank: 4 · 3 · 6 · 18

9. **Sort each story: divide, or just subtract?**

Write each item under the correct heading.

items: 16 shared by 4 kids · 18 made into rows of 6 · 10 candies, 3 eaten · 8 left after giving 2 away

DIVIDE	SUBTRACT

10. **21 stickers shared by 3 kids. How many each?**

21 divided by 3.

(A) 7
(B) 9
(C) 8
(D) 6

11. **You dealt 10 dots evenly onto 2 plates. What division is that?**

Total divided by groups.

(A) 10 + 2

(B) 10 divided by 2

(C) 2 divided by 10

(D) 10 - 2

12. **Order these by their answer, smallest first.**

Work out each quotient, then put them in order.

Number these from 1 to 3 in the correct order.

☐ 20 divided by 4

☐ 21 divided by 3

☐ 12 divided by 4

13. **How do you solve a story that splits a total into equal groups?**

Which idea?

(A) multiply the two numbers to find out how many you have altogether now

(B) add the two numbers in the story together to get a much bigger total

(C) keep the bigger number and ignore the smaller number in the story

(D) divide the total by the number of groups or by the size of each group

14. **A coach splits 18 players into teams of 6. How many teams?**

18 divided by 6.

(A) 12

(B) 2

(C) 3

(D) 4

15. **If 20 markers are shared by 4 kids, does each get 8?**

Circle one: **YES** / **NO**

16. **20 crackers are shared equally by 4 friends. How many does each get?**

20 divided by 4.

(A) 5

(B) 4

(C) 6

(D) 20

WEEK 3 · DAY 3

3.OA.A.3

Multiply or Divide?

Word Problems — Decide whether a word problem calls for multiplication or division and solve it.

LEARN

Some stories multiply, some divide. The clue is what the story GIVES you and what it ASKS. - groups and size given, find the total -> MULTIPLY;
- total given, find the groups or the size -> DIVIDE.

Ask: is the total already known? '4 bags of 5' - no total yet, you build it: multiply, 4 x 5 = 20. '20 shared by 4' - total is 20, you break it: divide, 20 divided by 4 = 5. Building a total multiplies. Breaking a total divides.

Multiplication and division are partners. The numbers 4, 5, and 20 answer both:

- 4 groups of 5 build 20 (multiply);
- 20 split by 4 gives 5 (divide). Spot the total to know which question the story is asking.

Today you chose the operation:

- groups and size given, total unknown -> multiply;
- total given, find groups or size -> divide;
- they are partners that undo each other. Tomorrow: writing an equation with a symbol for the unknown.

1. **'6 rows of 3 chairs. How many chairs?' Multiply or divide?**

Is the total known?

(A) Multiply

(B) Divide

(C) Subtract

(D) Add

2. **'18 chairs in 6 rows. How many per row?' Multiply or divide?**

Is the total known?

(A) Subtract

(B) Divide

(C) Add

(D) Multiply

3. **If a story asks you to BUILD a total from equal groups, do you multiply?**

Circle one: **YES** / **NO**

4. **'4 vans carry 5 kids each. How many kids?' Solve it.**

Build the total: 4 x 5.

4 x 5 = _____

word bank: 20 · 9 · 16 · 25

5. **Match each story to the operation it needs.**

Draw a line from each item on the left to its match on the right.

3 boxes of 6, total?	· ·	multiply
18 split by 3, each?	· ·	divide
5 rows of 4, total?	· ·	multiply
20 into 5s, how many?	· ·	divide

6. **'24 marbles shared by 4 kids. How many each?' What is the answer?**

Break the total: 24 divided by 4.

(A) 5
(B) 6
(C) 28
(D) 8

7. **If a story gives the total and asks for the number of groups, do you multiply?**

Circle one: **YES** / **NO**

8. **'21 books, 3 to a stack. How many stacks?' Solve it.**

Break the total: 21 divided by 3.

21 divided by 3 = _____

word bank: 7 · 6 · 8 · 18

9. **Sort each story: multiply or divide?**

Write each item under the correct heading.

items: 5 bags of 3, total? · 15 shared by 3, each? · 4 rows of 6, total? · 24 into 6s, how many?

MULTIPLY	DIVIDE

10. **'7 plates with 3 buns each. How many buns?' What is the answer?**

Build the total: 7 x 3.

(A) 24
(B) 10
(C) 18
(D) 21

11. **Which word in a story usually means the total is already known?**

A splitting word signals divide.

(A) groups of

(B) each

(C) shared

(D) rows of

12. **Find the answer: 7 plates with 3 buns each. How many buns?**

Circle the correct one: **18** **21** **10** **24**

13. **How do you decide whether to multiply or divide in a story?**

Which idea?

(A) add the numbers first and then guess which one looks more correct

(B) check whether the total is already known: build it or break it

(C) always pick multiply because it makes the answer come out bigger

(D) use whichever operation gives you an answer that is easier to say

14. **A baker has 30 rolls and packs 5 to a bag. How many bags?**

Total known, find groups: divide.

(A) 6

(B) 5

(C) 25

(D) 7

15. **For '5 boxes of 4 pens, how many pens?', should you divide?**

Circle one: **YES** / **NO**

16. **Which story needs division?**

Division breaks a total into equal parts.

(A) 6 toys and 2 more toys - how many in all

(B) 3 boxes with 5 toys each - how many toys in all

(C) 15 toys shared equally by 3 kids - how many each

(D) 4 toys on a shelf and 3 on the floor - how many

WEEK 3 · DAY 4 3.OA.A.3

Equations With an Unknown

Word Problems — Write an equation with a symbol for the unknown to represent a word problem, then solve it.

LEARN

When a story has a number you do not know yet, write it with a symbol. We use a question mark. '5 bags of 3 apples. How many apples?' becomes 5 x 3 = ? The ? stands for the number you are looking for. Then solve: ? = 15.

The unknown is not always the total. '20 apples in 4 bags. How many in each?' is 4 x ? = 20, and ? = 5. 'I have 18 in groups of 6. How many groups?' is ? x 6 = 18, and ? = 3. Write the equation, then find ?.

For any story:

1. Write the equation with a ? for the unknown. 2. Solve for the ?. The equation keeps your thinking clear, so you do not mix up what you are looking for.

Today you wrote equations with a symbol:

- the ? stands for the unknown;
- it can be the total, a factor, or a quotient;
- write the equation first, then solve for ?. Tomorrow is the Week 3 check.

1. **'6 rows of 4 chairs. How many chairs?' Which equation fits?**

The total is unknown.

(A) 6 divided by 4 = ?

(B) 6 + 4 = ?

(C) 4 - 6 = ?

(D) 6 x 4 = ?

2. **Solve 6 x 4 = ?**

6 groups of 4.

(A) 10

(B) 20

(C) 24

(D) 28

3. **Can a symbol like ? stand for the number you do not know yet?**

Circle one: **YES** / **NO**

4. **'15 books shared on 3 shelves.' Finish: 15 divided by 3 = ?**

Solve for the ?.

15 divided by 3 = _____

word bank: 5 · 4 · 6 · 12

5. **Match each story to its equation.**

Draw a line from each item on the left to its match on the right.

4 bags of 5, total?	· ·	? x 6 = 18
20 in 4 bags, each?	· ·	3 x 7 = ?
18 in groups of 6, groups?	· ·	4 x ? = 20
3 rows of 7, total?	· ·	4 x 5 = ?

6. **'24 marbles in 4 equal bags. How many per bag?' Which equation fits?**

The size of each group is unknown.

- (A) 4 x ? = 24
- (B) 4 x 24 = ?
- (C) 24 x 4 = ?
- (D) 4 + ? = 24

7. **Is the unknown ALWAYS the total in a word problem?**

Circle one: **YES** / **NO**

8. **Solve for the unknown: ? x 6 = 18.**

What times 6 makes 18?

? = _____

word bank: 3 · 4 · 2 · 12

9. **Sort each story: does the equation multiply or divide to find ?**

Write each item under the correct heading.

items: 5 × 4 = ? · 20 divided by 5 = ? · 3 × 6 = ? · 18 divided by 3 = ?

MULTIPLY	DIVIDE

10. **'A 12-inch rope cut into 3-inch pieces. How many pieces?' Which equation fits?**

Total known, group size known.

- (A) 12 divided by 3 = ?
- (B) 3 - 12 = ?
- (C) 12 x 3 = ?
- (D) 12 + 3 = ?

11. **Solve 4 x ? = 20.**

What times 4 makes 20?

- (A) 4
- (B) 6
- (C) 16
- (D) 5

12. **Put the steps for solving a word problem in order.**

What do you do first, next, and last?

Number these from 1 to 4 in the correct order.

- [ ] Check the answer
- [ ] Solve for the unknown
- [ ] Write the equation
- [ ] Read the story

13. **What does a symbol like ? do in an equation?**

Which idea?

- (A) it shows the answer is too hard to ever figure out at all
- (B) it tells you the very last number that was given in the problem
- (C) it stands for the number you do not know yet and must find
- (D) it means you should add every number that appears in the story

14. **'28 students in teams of 7. How many teams?' Write and solve the equation.**

? x 7 = 28.

- (A) 21
- (B) 4
- (C) 5
- (D) 3

15. **Does 5 x ? = 30 mean ? = 5?**

Circle one: **YES** / **NO**

16. **16 crayons are split equally into 4 boxes: 4 x ? = 16. What is the missing number?**

4 times what is 16?

- (A) 3
- (B) 8
- (C) 4
- (D) 12

WEEK 3 · DAY 5 3.OA.A.3

Week 3 Mastery Check

Word Problems — Show mastery of multiplication and division word problems, including writing an equation with a symbol for the unknown.

LEARN

This week you solved word problems: multiply to build a total, divide to break one, and write an equation with a ? for the unknown. First a few warm-ups, then the graded check.

Remember:

- equal groups, total unknown -> multiply;
- total given, find groups or size -> divide;
- write the equation with a ?, then solve.

You can solve multiplication and division word problems and write them with a symbol for the unknown. Next week: the properties that make multiplying easier.

1. **5 bags with 4 apples each. How many apples?**

5 x 4.

(A) 9
(B) 25
(C) 20
(D) 16

2. **18 grapes shared by 3 kids. How many each?**

18 divided by 3.

(A) 5
(B) 6
(C) 9
(D) 15

3. **Do you multiply when the total is unknown and you have equal groups?**

Circle one: **YES** / **NO**

4. **For '20 shared by 5', do you add 20 and 5?**

Circle one: **YES** / **NO**

5. **'4 vans with 5 kids each. How many kids?' Solve.**

4 x 5.

4 x 5 = _____

word bank: 20 · 9 · 16 · 25

6. **Which equation fits '24 marbles in 4 bags, how many each'?**

Size of each is unknown.

- (A) 4 x ? = 24
- (B) 4 + ? = 24
- (C) 4 x 24 = ?
- (D) 24 x 4 = ?

7. **Match each equation to its missing number.**

Draw a line from each item on the left to its match on the right.

? x 6 = 18	· ·	4
4 x ? = 20	· ·	3
24 divided by ? = 6	· ·	5

8. **Match each story to the operation it needs.**

Draw a line from each item on the left to its match on the right.

3 boxes of 6, total?	· ·	multiply
20 split by 4, each?	· ·	divide
15 into 5s, how many?	· ·	divide

WEEK 3 MASTERY CHECK. ANSWER ALL 6.

9. **6 plates with 3 buns each. How many buns?**

- (A) 21
- (B) 12
- (C) 18
- (D) 9

10. **20 books shared on 4 shelves. How many per shelf?**

- (A) 5
- (B) 6
- (C) 16
- (D) 8

11. **Which equation fits '18 in groups of 6, how many groups'?**

- (A) 6 + ? = 18
- (B) 18 x 6 = ?
- (C) ? x 6 = 18
- (D) 6 x 18 = ?

12. Can a symbol like ? stand for a number you do not know yet?

Circle one: **YES** / **NO**

13. A 15-inch ribbon is cut into 3-inch pieces. How many pieces?

(A) 12

(B) 6

(C) 3

(D) 5

14. A coach splits 28 players into teams of 7. How many teams?

(A) 5

(B) 4

(C) 21

(D) 3

MINISTRIES FREE ACADEMY

Answer Key

Grade 3 Mathematics · Multiplication & Division · Weeks 1–3

Week 1 · Day 1 — Equal Groups

1. C (12)
2. B (2 x 5)
3. Yes
4. 10
5. 2 groups of 3 → 6; 3 groups of 4 → 12; 4 groups of 2 → 8; 5 groups of 2 → 10
6. B (12)
7. Yes
8. 6
9. 3 bags of 4 → Equal groups; 2 rows of 5 → Equal groups; a 2 and a 5 → Not equal; 4 and then 6 → Not equal
10. C (3 plates with 4 cookies each)
11. 10
12. C (it adds up equal groups quickly to find the total)
13. 2
14. No
15. D (10)
16. C (15)

Week 1 · Day 2 — Arrays

1. B (12)
2. D (2 x 5)
3. Yes
4. 12
5. 2 rows of 4 → 8; 3 rows of 3 → 9; 5 rows of 2 → 10; 4 rows of 4 → 16
6. C (15)
7. 3 x 4 → 12; 2 x 5 → 10; 4 x 4 → 16; 5 x 3 → 15
8. 12
9. 3 even rows of 4 → An array; 2 even rows of 5 → An array; a messy pile → Not an array; rows of 3 then 5 → Not an array
10. D (4 rows of 2 dots)
11. Yes
12. D (multiply the number of rows by how many are in each row)
13. 5
14. No
15. C (20)
16. A (18)

Week 1 · Day 3 — Repeated Addition

1. C (3 + 3 + 3 + 3)
2. D (15)
3. Yes
4. 8
5. 3 x 4 → 4 + 4 + 4; 2 x 6 → 6 + 6; 4 x 5 → 5 + 5 + 5 + 5; 3 x 2 → 2 + 2 + 2
6. C (10)
7. No
8. 12
9. 4 + 4 + 4 → Matches 3 x 4; skip count 4, 8, 12 → Matches 3 x 4; 3 + 4 → Does not; 4 + 4 → Does not
10. A (3 x 5)
11. 1) 5; 2) 10; 3) 15; 4) 20
12. C (add the number 3 four separate times to get the total)
13. 18
14. No
15. D (20)
16. C (5 x 4)

Week 1 · Day 4 — Multiplication Stories

1. D (12)
2. A (10)
3. Yes
4. 15
5. 2 cars, 4 wheels each → 8; 3 hands, 5 fingers each → 15; 4 nests, 3 eggs each → 12; 5 bags, 2 nuts each → 10
6. D (12)
7. No
8. 24
9. 3 boxes of 4 each → Multiply; 5 jars of 2 each → Multiply; 4 red and 3 blue, in all → Add; 6 here and 2 more → Add
10. C (12)
11. 12
12. A (multiply the number of groups by how many are in each group)
13. 10
14. No
15. A (18)
16. C (12)

Week 1 · Day 5 — Week 1 Mastery Check

1. C (12)
2. D (10)
3. Yes
4. No
5. 8
6. 4 x 3 → 12; 2 x 5 → 10; 3 x 3 → 9
7. D (12)
8. C (15)
9. C (12)
10. B (12)
11. C (3 + 3 + 3 + 3)
12. A (adds equal groups to find a total)
13. D (10)
14. B (18)

Week 2 · Day 1 — Sharing Equally

1. D (4)
2. C (5)
3. Yes
4. 2
5. 6 on 2 plates → 3; 12 on 4 plates → 3; 15 on 3 plates → 5; 8 on 2 plates → 4
6. A (3)
7. No
8. 4
9. 8 shared by 2 → 4 each; 10 shared by 2 → 5 each; share 8 candies → 4 each; share 10 candies → 5 each
10. C (4)
11. B (How many in each group)
12. 4
13. B (give each of the 4 plates the same number until the 12 are gone)
14. D (6)
15. No
16. B (5)

Week 2 · Day 2 — Making Equal Groups

1. C (4)
2. A (2)
3. Yes
4. 2
5. 6 made into 2s → 3; 12 made into 6s → 2; 15 made into 5s → 3; 8 made into 2s → 4
6. D (3)
7. No
8. 4
9. 9 into 3s → 3 groups; 12 into 3s → 4 groups; make 3s from 9 → 3 groups; make 3s from 12 → 4 groups
10. D (4)
11. C (How many groups you made)
12. 12 divided by 3 → 4; 10 divided by 5 → 2; 15 divided by 3 → 5; 18 divided by 6 → 3
13. C (how many equal groups of 5 you can pull out of the fifteen)
14. D (3)
15. No
16. C (6)

Week 2 · Day 3 — Reading Division

1. B (12)
2. A (5)
3. Yes
4. 7
5. 12 divided by 2 → 6; 12 divided by 3 → 4; 12 divided by 4 → 3; 12 divided by 6 → 2
6. A (20)
7. No
8. 9
9. 9 divided by 3 → Answer is 3; 12 divided by 3 → Answer is 4; 15 divided by 5 → Answer is 3; 16 divided by 4 → Answer is 4
10. C (6)
11. D (3)
12. 1) 15 divided by 3; 2) 24 divided by 4; 3) 18 divided by 2
13. A (the whole total amount that you are going to split into equal groups)
14. B (21 divided by 3)
15. No
16. A (8 ÷ 2)

Week 2 · Day 4 — Division Stories

1. C (3)
2. B (7)
3. Yes
4. 6
5. 10 split onto 2 plates → 5; 12 split into 4s → 3; 16 shared by 4 → 4; 20 made into 5s → 4
6. A (3)
7. No
8. 4
9. 12 shared by 3 kids → Divide; 20 split into 4 rows → Divide; 4 red and 5 blue in all → Add; 6 here and 3 more → Add
10. D (4)
11. C (how many cups)
12. 4
13. A (divide the total by the number of groups or by the size of each group)
14. C (3)
15. No
16. B (6)

Week 2 · Day 5 — Week 2 Mastery Check

1. A (3)
2. D (5)
3. Yes
4. No
5. 5
6. C (20)
7. 1) 20 divided by 5; 2) 12 divided by 2; 3) 16 divided by 2
8. 18 divided by 2 → 9; 18 divided by 3 → 6; 18 divided by 6 → 3
9. D (4)
10. B (3)
11. A (the whole total being split into groups)
12. Yes
13. B (4)
14. A (7)

Week 3 · Day 1 — Multiplication Word Problems

1. B (12)
2. A (20)
3. Yes
4. 18
5. 2 rows of 7 → 14; 3 bags of 4 → 12; 5 cups of 2 → 10; 4 boxes of 4 → 16
6. B (15)
7. No
8. 14
9. 4 jars of 3 each → Multiply; 6 rows of 2 each → Multiply; 3 red and 4 blue in all → Add; 5 here and 2 more → Add
10. A (20)
11. B (3 x 5)
12. 20
13. A (multiply the number of groups by how many are in each group)
14. D (30)
15. No
16. C (20)

Week 3 · Day 2 — Division Word Problems

1. C (3)
2. D (5)
3. Yes
4. 5
5. 14 shared by 2 → 7; 18 split onto 3 plates → 6; 16 made into 4s → 4; 10 made into 2s → 5
6. B (3)
7. No
8. 4
9. 16 shared by 4 kids → Divide; 18 made into rows of 6 → Divide; 10 candies, 3 eaten → Subtract; 8 left after giving 2 away → Subtract
10. A (7)
11. B (10 divided by 2)
12. 1) 12 divided by 4; 2) 20 divided by 4; 3) 21 divided by 3
13. D (divide the total by the number of groups or by the size of each group)
14. C (3)
15. No
16. A (5)

Week 3 · Day 3 — Multiply or Divide?

1. A (Multiply)
2. B (Divide)
3. Yes
4. 20
5. 3 boxes of 6, total? → multiply; 18 split by 3, each? → divide; 5 rows of 4, total? → multiply; 20 into 5s, how many? → divide
6. B (6)
7. No
8. 7
9. 5 bags of 3, total? → Multiply; 15 shared by 3, each? → Divide; 4 rows of 6, total? → Multiply; 24 into 6s, how many? → Divide
10. D (21)
11. C (shared)
12. 21
13. B (check whether the total is already known: build it or break it)
14. A (6)
15. No
16. C (15 toys shared equally by 3 kids - how many each)

Week 3 · Day 4 — Equations With an Unknown

1. D (6 x 4 = ?)
2. C (24)
3. Yes
4. 5
5. 4 bags of 5, total? → 4 x 5 = ?; 20 in 4 bags, each? → 4 x ? = 20; 18 in groups of 6, groups? → ? x 6 = 18; 3 rows of 7, total? → 3 x 7 = ?
6. A (4 x ? = 24)
7. No
8. 3
9. 5 x 4 = ? → Multiply; 20 divided by 5 = ? → Divide; 3 x 6 = ? → Multiply; 18 divided by 3 = ? → Divide
10. A (12 divided by 3 = ?)
11. D (5)
12. 1) Read the story; 2) Write the equation; 3) Solve for the unknown; 4) Check the answer
13. C (it stands for the number you do not know yet and must find)
14. B (4)
15. No
16. C (4)

Week 3 · Day 5 — Week 3 Mastery Check

1. C (20)
2. B (6)
3. Yes
4. No
5. 20
6. A (4 x ? = 24)
7. ? x 6 = 18 → 3; 4 x ? = 20 → 5; 24 divided by ? = 6 → 4
8. 3 boxes of 6, total? → multiply; 20 split by 4, each? → divide; 15 into 5s, how many? → divide
9. C (18)
10. A (5)
11. C (? x 6 = 18)
12. Yes
13. D (5)
14. B (4)