

Grade 4 · Factors, Multiples, Primes and Composites · Worksheet

Common Core 4.OA.B.4 · mathovore.fr

Name: _____ Date: ____/____/____ Score: _____

These 22 problems practice factors, multiples, factor pairs, and prime and composite numbers from standard 4.OA.B.4. They begin with skip counting and rectangles, then move to factor pairs up to 100 and to deciding whether a number is prime.

The last six problems are word problems about chairs, cookies, savings, and stickers. Show your list of factors and check each one by multiplying.

Grade 4 Common Core: 4.OA.B.4

Problem 1: First eight multiples of 3

Write the first 8 multiples of 3.

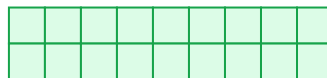
Problem 2: Rectangles of 18 squares

The rectangles below each use 18 squares. Write a multiplication sentence for each rectangle, then list all the factors of 18.

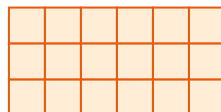
1 x 18



2 x 9



3 x 6



All the rectangles that can be made with 18 squares.

Problem 3: Is 7 a factor?

Is 7 a factor of 42? Is 7 a factor of 45? Explain each answer.

Problem 4: Factors of 20

List all the factors of 20 in order.

Problem 5: Multiples of 6 below 40

Write every multiple of 6 that is less than 40.

Problem 6: Multiple of 8?

Is 56 a multiple of 8? Is 58 a multiple of 8?

Problem 7: Factor pairs of 28

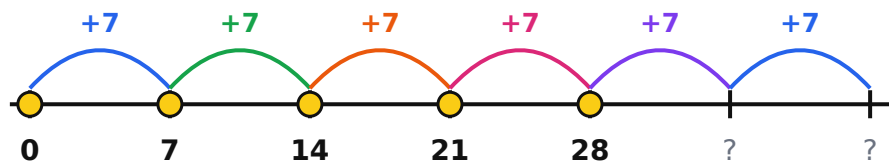
Write all the factor pairs of 28.

Problem 8: Prime or composite?

Tell whether each number is prime or composite: 13, 21, 29, 51.

Problem 9: Hops on a number line

The number line shows equal hops. Write the rule for the hops, then find the two missing numbers. Is 49 the next mark after them?



Equal hops along a number line.

Problem 10: Multiples of 9 on a chart

Shade every multiple of 9 on the hundred chart. What do you notice about the digits of each number?

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Shade the multiples of 9.

Problem 11: Factors of 45

List all the factors of 45.

Problem 12: Multiples of 4

Circle the multiples of 4: 24,35,48,52,60.

Problem 13: Factor pairs of 64

Find all the factor pairs of 64. Which pair uses the same number twice?

Problem 14: Missing factor

Find the missing number: $9 \times [\square] = 72$. Then tell whether 72 is a multiple of 9.

Problem 15: Sort the numbers

Sort these numbers into prime and composite: 11,27,37,49,57,91.

Problem 16: Arrays and primes

Use the arrays to explain why 5 is prime but 6 is composite.



$$1 \times 5 = 5$$



$$2 \times 3 = 6$$

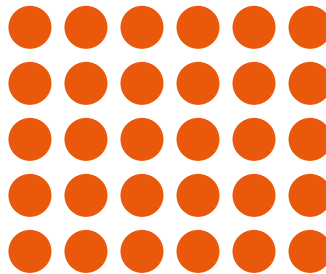
Arrays for 5 dots and 6 dots.

Problem 17: Mystery number

A number is a multiple of 7 and is between 50 and 60. Find the number.

Problem 18: Setting up chairs

Maya sets up 30 chairs for the school play in equal rows, as in the picture. List every factor pair of 30. How many different rectangular arrangements are there if turning a rectangle on its side counts as the same one?



$$5 \text{ rows of } 6 = 30$$

One arrangement of 30 chairs.

Problem 19: Cookie boxes

The bake sale has 48 cookies. Aisha wants to pack them in boxes with the same number of cookies in every box, with no cookies left over. Each box must hold from 4 to 12 cookies. How many cookies can go in one box? How many boxes does each choice need?

Problem 20: Saving in the jar

Jamal puts \$6 in a jar every week. He starts with an empty jar. List the amounts in the jar after weeks 1 through 10. Could the jar hold exactly \$50? Exactly \$54? If so, after which week?

Problem 21: Priya's claim

Priya says that 51 is prime because it is odd and is not in her skip counting list for 2, 5, or 10. Is she right? Use factors to explain.

Problem 22: Sticker pages

Ethan has 72 stickers. He puts the same number on each page of an album, using all of them. He wants at least 2 and at most 10 stickers on a page. List every choice and the number of pages it needs.