Grade 4 Math

Factors and Multiples

Prime and Composite

Find the pairs. Connect the factors and multiples.



Arrays and complete factor-pair lists

Multiples, charts and prime-number reasoning

Original stories, a code and Mixed Review

12 practice pages and 12 matching worked keys

Georgia's K-12 Mathematics Standards

4.PAR.3.3 | 4.PAR.3.4

26 pages | Print at 100% | Answer keys included

TOUCHSTONE STANDARDS

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Georgia's K-12 Mathematics Standards

4.PAR.3
Generate and analyze patterns, including those involving shapes, input/output diagrams, factors, multiples, prime numbers, and composite numbers.

4.PAR.3.3
Find factor pairs in the range 1-100 and find multiples of single-digit numbers up to 100.

4.PAR.3.4
Identify composite numbers and prime numbers and explain the relationship with the factor pairs.

GaDOE expectations and definitions (p50)

Students should be able to recognize that a whole number is a multiple of each of its factors.

Determine whether a given whole number in the range 1-100 is prime or composite or neither.

Students should be able to describe the relationship between the numbers related to the factor pairs.

Prime number: A whole number greater than 1 that with two unique factors, 1 and itself.

Composite number: A whole number greater than 1 that has at least one whole-number factor other than 1 and itself.

Practice / key: page map and codes

3 / 15 Pairs with Arrays
4 / 16 All the Factor Pairs
5 / 17 Hundreds Chart
6 / 18 Factors and Multiples
7 / 19 Prime or Composite?
8 / 20 Find the Primes to 50
9 / 21 Explain with Factor Pairs
10 / 22 Factor Stories
11 / 23 Multiples Stories
12 / 24 True or False?
13 / 25 Factor Code
14 / 26 Mixed Review

Teaching notes

Pages 3 to 6, 10 and 11: 4.PAR.3.3. Pages 7 to 9: 4.PAR.3.4. Pages 12 to 14 practice both.

List each factor pair once; a reversed pair is the same pair. Square pairs appear once.

Prime: exactly two distinct factors. Composite: more than two. The number 1 is neither.

The source definitions above are quoted exactly; a dash is printed as a colon. The range dash prints as a hyphen.

Any correct reasoning earns credit. Answers without commas are also correct.

Follow Touchstone Standards on TPT for new Grade 4 resources. After use, an honest review helps us improve.

Print at 100%. This bar must measure 2 inches.



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Multiples on a Hundreds Chart

Name _____ Print at 100%

Use the models and factor pairs to explain your answers.

Strategy Spotlight

First five multiples of 5:
5, 10, 15, 20, 25
5 × 5 = 25

1 Through 100 Circle multiples of 6; square multiples of 7.

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

Circle 6

Square 7

2 Is the whole a multiple of the base?

Is 54 a multiple of 6 ?

3 Find this multiple of the base.

4 th multiple of 8

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Answer Key: Multiples on a Hundreds Chart

Name _____ Print at 100%

Use the models and factor pairs to explain your answers.

Strategy Spotlight

First five multiples of 5:
5, 10, 15, 20, 25
5 × 5 = 25

1 Through 100 Circle multiples of 6; square multiples of 7.

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

Circle 6

Square 7

2 Is the whole a multiple of the base?

Is 54 a multiple of 6 ?

Yes

6 × 9 = 54
It is a multiple of the base.

3 Find this multiple of the base.

4 th multiple of 8

32

4 × 8 = 32

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Find the Primes to 50

Name _____ Print at 100%

Use the models and factor pairs to explain your answers.

Strategy Spotlight

33 = 1 × 33
33 = 3 × 11
Two factor pairs make 33 composite.

1 50 Cross out 1. Circle 2, then cross out its other multiples.

Repeat with 3, 5 and 7, skipping each circled prime.

Passes:
2 3 5 7

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

Circle every uncrossed number greater than 1; those numbers are prime.

2 How many primes from 1 through 50

Justify the circled prime 19

3 List multiples of both passes through 50

Passes: 2 and 5

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Answer Key: Find the Primes to 50

Name _____ Print at 100%

Use the models and factor pairs to explain your answers.

Strategy Spotlight

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Passes:
2 3 5 7

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 ✖

Circle every uncrossed number greater than 1; those numbers are prime.

2 How many primes from 1 through 50

Justify the circled prime 19

15

The chart has 15 circled primes.
Only 1 × 19; exactly 2 factors.

3 List multiples of both passes through 50

Passes: 2 and 5

10, 20, 30, 40, 50
Each is a multiple of both pass numbers.

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