MATH

Prime and composite numbers

Name _____ Date _____

I can tell if a number is prime or composite.

1 How it works

A prime number has exactly two factors: 1 and itself. 7 is prime. A composite number has more than two factors. 9 is composite because 3 × 3 = 9. The number 1 is neither prime nor composite.

7 is prime
factors: 1, 7
9 is composite
factors: 1, 3, 9
1 is neither

2 List the factors, then circle prime or composite

1. **43** prime composite
   Factors: _____
2. **33** prime composite
   Factors: _____
3. **29** prime composite
   Factors: _____
4. **11** prime composite
   Factors: _____
5. **51** prime composite
   Factors: _____
6. **27** prime composite
   Factors: _____
7. **25** prime composite
   Factors: _____
8. **37** prime composite
   Factors: _____

How did I do? ☆ ☆ ☆

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Find the primes

Name _____ Date _____

I can find prime numbers.

1 Circle the prime numbers

Circle the primes

29 25 21 27 7 17 20 13 15 26

Circle the primes

46 36 51 57 39 53 45 37 47 43

Circle the primes

92 97 79 85 99 96 77 73 91 89

2 Sieve the numbers to 50

The numbers left are prime.

Cross out 1. Then cross out the multiples of 2 (but not 2), of 3 (but not 3), of 5 (but not 5) and of 7 (but not 7). Circle every number that is left.

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

How did I do? ☆ ☆ ☆

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Sort and think

Name _____ Date _____

I can sort numbers into prime and composite.

1 Sort the numbers

Write each number in the right box.

43	3	17	44	40	42	24	7	45	13

Prime	Composite

2 Think about it

1. What is the only even prime number?
2. What is the smallest composite number?
3. Write two prime numbers that add up to 12.
4. Is 1 prime, composite or neither?
5. I am prime. I am between 40 and 50. My ones digit is 3.

How did I do? ☆ ☆ ☆

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Word problems

Name _____ Date _____

I can use factors and multiples to solve problems.

1 Read, think, answer

Show your thinking in the box.

1 Noor has 13 cookies and wants to put them in equal rows. How many different ways can Noor do it? Is 13 prime or composite?

Answer:

2 A teacher has 21 students. Can she put them in equal groups with more than 1 student and more than 1 group? Is 21 prime or composite?

Answer:

3 Ben says, "All odd numbers are prime." Find an odd number that shows Ben is wrong.

Answer:

4 I am a prime number between 20 and 30. The sum of my digits is 5. What number am I?

Answer:

How did I do? ☆ ☆ ☆

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FOR TEACHERS AND PARENTS

Answer key: prime and composite numbers

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1) 43: 1, 43, prime; 2) 33: 1, 3, 11, 33, composite; 3) 29: 1, 29, prime; 4) 11: 1, 11, prime; 5) 51: 1, 3, 17, 51, composite; 6) 27: 1, 3, 9, 27, composite; 7) 25: 1, 5, 25, composite; 8) 37: 1, 37, prime.

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Circle the primes: row 1: 29, 7, 17, 13; row 2: 53, 37, 47, 43; row 3: 97, 79, 73, 89.

Sieve: the primes to 50 are 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47.

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Sort: prime: 3, 7, 13, 17, 43. Composite: 24, 40, 42, 44, 45.

Think: 1) 2; 2) 4; 3) 5 and 7; 4) neither (it has only one factor); 5) 43.

4 Page 4: word problems

1) 1 row of 13 or 13 rows of 1. 13 is prime.

2) Yes, 3 groups of 7 or 7 groups of 3. 21 is composite.

3) Any odd composite number, such as 9, 15, 21 or 25

4) 23

5 Teaching tip

To test a number under 100, try dividing by 2, 3, 5 and 7. If none of them divides it exactly, the number is prime.

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