

Homework & Practice 7-4

Prime and Composite Numbers

Another Look!

You can look for factors to help you tell whether a number is prime or composite.



Is 15 a prime or a composite number?
Find all the factors of 15.

Factors of 15: 1, 3, 5, 15

15 is a composite number because it has more than two factors.

Is 29 a prime or a composite number?
Find all the factors of 29.

Factors of 29: 1, 29

29 is a prime number because it only has two factors, 1 and the number itself.

For 1–4, use or draw arrays to tell whether each number is prime or composite.

1. 7

2. 9

3. 8

4. 4

For 5–16, tell whether each number is prime or composite.

5. 81

6. 43

7. 72

8. 93

9. 53

10. 87

11. 13

12. 27

13. 88

14. 19

15. 69

16. 79

17. **MP.7 Use Structure** Create a list of prime numbers from 1 to 100.

- Write all the numbers from 1 to 100.
- Draw a triangle around 1; it is neither prime nor composite.
- Circle 2 and cross out all other multiples of 2.
- Circle 3 and cross out all other multiples of 3.
- Circle 5 and cross out all other multiples of 5.
- Continue in the same way. The circled numbers are prime.

△ 1	②	③	✕ 4	⑤
✕ 6	⑦	✕ 8	✕ 9	✕ 10
⑪	✕ 12	⑬	✕ 14	✕ 15
✕ 16	⑰	✕ 18	⑲	✕ 20
✕ 21	✕ 22	⑳	✕ 24	✕ 25
✕ 26	✕ 27	✕ 28	㉑	✕ 30
⑳	✕ 32	✕ 33	✕ 34	✕ 35
✕ 36	㉓	✕ 38	✕ 39	✕ 40

How many prime numbers are between 1 and 100?

18. **Number Sense** Are all odd numbers prime numbers? Explain.

19. **Math and Science** Some plants have thorns for protection. Ben is a florist and cuts thorns from flowers. On Monday, he cut 267 thorns. On Tuesday, he cut 381 thorns. On Wednesday, he cut 522 thorns. How many thorns did Ben cut?

20. **Vocabulary** Use *prime* and *composite* to complete the definitions.

A _____ number is a whole number greater than 1 that has more than 2 factors. A _____ number is a whole number greater than 1 that has exactly two factors, 1 and itself.

21. **Higher Order Thinking** Larry says all numbers that have a 2 in the ones place are composite numbers. Explain if Larry is correct or incorrect.

Common Core Assessment

22. Which of the following digits might composite numbers greater than 10 have in the ones place? Select all that apply.

- 1
- 2
- 3
- 4
- 5

23. Which of the following digits might prime numbers greater than 10 have in the ones place? Select all that apply.

- 0
- 2
- 3
- 7
- 9