1. Record the factors of the given numbers as multiplication sentences and as a list in order from least to greatest. Classify each as prime (P) or composite (C).

	Multiplication Sentences	Factors	P or C
a.	5 $\mathbf{1 \times 5 = 5}$	The factors of 5 are $\mathbf{1, 5}$	***P***
b.	18 $\mathbf{1 \times 18 = 18}$ $\mathbf{2 \times 9 = 18}$ $\mathbf{3 \times 6 = 18}$	The factors of 18 are $\mathbf{1, 2, 3, 6, 9, 18}$	***C***

I know a number is prime if it has only two factors. I know a number is composite if it has more than two factors.

2. Find all factors for the following number, and classify the number as prime or composite. Explain your classification of prime or composite.

Factor Pairs for 12	
$\mathbf{1}$	$\mathbf{12}$
$\mathbf{2}$	$\mathbf{6}$
$\mathbf{3}$	$\mathbf{4}$

12 is composite. I know that it is composite because it has more than two factors.

I think of the multiplication facts that have a product of 12.

3. Jenny has 25 beads to divide evenly among 4 friends. She thinks there will be no leftovers. Use what you know about factor pairs to explain whether or not Jenny is correct.

Jenny is not correct. There will be leftovers. I know this because if 4 is one of the factors, there is no whole number that multiplies by 4 to get 25 as a product. There will be one bead left over.

$4 \times 6 = 24$ and $4 \times 7 = 28$. There is no factor pair for 4 that results in a product of 25.

Name _____ Date _____

1. Record the factors of the given numbers as multiplication sentences and as a list in order from least to greatest. Classify each as prime (P) or composite (C). The first problem is done for you.

	Multiplication Sentences	Factors	P or C
a.	8 $1 \times 8 = 8$ $2 \times 4 = 8$	The factors of 8 are: 1, 2, 4, 8	C
b.	10	The factors of 10 are:	
c.	11	The factors of 11 are:	
d.	14	The factors of 14 are:	
e.	17	The factors of 17 are:	
f.	20	The factors of 20 are:	
g.	22	The factors of 22 are:	
h.	23	The factors of 23 are:	
i.	25	The factors of 25 are:	
j.	26	The factors of 26 are:	
k.	27	The factors of 27 are:	
l.	28	The factors of 28 are:	

2. Find all factors for the following numbers, and classify each number as prime or composite. Explain your classification of each as prime or composite.

Factor Pairs for 19	

Factor Pairs for 21	

Factor Pairs for 24	

3. Bryan says that only even numbers are composite.

   a. List all of the odd numbers less than 20 in numerical order.

   b. Use your list to show that Bryan's claim is false.

4. Julie has 27 grapes to divide evenly among 3 friends. She thinks there will be no leftovers. Use what you know about factor pairs to explain whether or not Julie is correct.