

Name:

Class:

Date:

## HW #2

For #1-6, write the prime factorization of each number in expanded form and exponential form.

1. 48

2. 180

3. 45

4. 760

5. 216

6. 525

7. Which of the numbers 19, 21, 23, and 25 has the most factors?
8. Find a number greater than 25 that has more factors than the answer to problem #7. Name the number, and list all its factors.
9. Find a number smaller than 19 that has more factors than the numbers in problem #7. Name the number, and list all its factors.
10. Henry knows that 3 is a factor of 24. This means that  $3 \times \square = 24$ . Another way to write this is  $3 \times n = 24$ . For each statement, find a value of  $n$  that makes the statement true.
- a.  $3 \times n = 24$
  - b.  $5 \times n = 40$
  - c.  $12 \times n = 144$
  - d.  $160 = 8 \times n$
  - e.  $2 \times 3 \times n \times n = 150$