

Each WA is worth **10 points** total. Work right on these pages. You can work together or see a tutor, but NEVER copy. This WA is for a grade, so dishonesty or cutting corners may earn a 0 for all involved.

1. [2 pts] Clearly explain whether the statement below is true or false, using the formal definition of “divides.”.

36 divides 9.

2. [2 pts - 0.5 each] If the number N is a multiple of 14, circle all statements below that are also true.

(a) N is a factor of 14.

(b) N is divisible by 14.

(c) 14 is a divisor of N .

(d) $14|N$.

3. (a) [1 pt] List ALL of the factors of 280.

(b) [1 pt] Now list all of the COUNTING NUMBER multiples of the number above.

4. [1 pt] Find all factors of 220 that are also multiples of 11.
5. [1 pt] Find the smallest value of the digit x so that the 5-digit number $23, x92$ is divisible by 7. Show supporting work, and clearly indicate your answer, but you need not explain.
6. [2 pts - 0.5 each] Indicate whether each statement below is true or false. SPELL out the word: no half-legible letter Ts or Fs alone.
- (a) 0 is factor of every whole number.
 - (b) 1 divides every whole number.
 - (c) An even number can never have an odd factor.
 - (d) Any multiple of 50 will also be a factor of 200.