

130 WORKSHEET (4.1)

Name \_\_\_\_\_

1. Test each of the following numbers to see if is perfect, deficient, or abundant. State the result below the number.  
A. 28                                      B. 72                                      C. 99
  
2. Is the following an instance of the Divisibility-of-a-Product Theorem? Explain.  
If  $8|64$  then  $8|640$ .
  
3. Use the Divisibility-of-a-Difference Theorem to complete the statement:  
If  $11|165$  and  $11|275$ , then \_\_\_\_\_.
  
4. Use the Divisibility-of-Sum Theorem to complete the statement:  
If  $9|135$  and  $9|207$ , then \_\_\_\_\_.
  
5. Without computing the value of  $A$ , decide if the number  $A = 9 \cdot 47 + 63$  is divisible by 9. Explain your decision.
  
6. Provide a proof that shows the following statement is always true.  
 $A$ ,  $B$ , and  $C$  are whole numbers, with  $A \neq 0$  and  $B \neq 0$ . If  $AB|C$ , then  $AB|(AB + C)$ .