

Extension – Theorem

Theorem For any integer a and d , if $d|a$ and k is an integer, then $d|ka$

True False *use the theorems*

- 1) If $3|x$ and $3|y$, then $3|xy$
- 2) If $3|(x + y)$, then $3|x$ and $3|y$
- 3) If $9 \nmid a$, then $3 \nmid a$

True False

- a) $3|3$ and $3|3$, then $3|9(3)$ True
- b) $3|(5 + 4)$, then $3|5$ and $3|4$ False
- c) $9 \nmid 21$, but $3|21$