

Lesson 3-13  $\rightarrow$  Multiple Solutions to  
 $y=mx+b$  and  $ax+by=c$   
equations

Both  $y=mx+b$  and  $ax+by=c$   
are linear equations and as  
such have multiple solutions

which points work for  $y=3x-7$

(a)

$(1, -4)$

$$y = 3x - 7$$

$$-4 = 3(1) - 7$$

$$-4 = 3 - 7$$

$$-4 = -4$$

yes!

(b)

$(2, 1)$

$$y = 3x - 7$$

$$1 = 3(2) - 7$$

$$1 = 6 - 7$$

$$1 = -1$$

NO!

(c)

$(5, 8)$

$$y = 3x - 7$$

$$8 = 3(5) - 7$$

$$8 = 15 - 7$$

$$8 = 8$$

yes!