

$$\textcircled{1} \quad y < -2x + 5$$

$$(1, 5): 5 < -2(1) + 5$$

$$5 < 3$$

False

$$(5, 3) \quad 3 < -2(5) + 5 \rightarrow$$

$$3 < 5$$

True

$$\textcircled{-4, 6} \quad 6 < -2(-4) + 5$$

$$6 < 13$$

True \rightarrow

$$y \geq x + 3$$

$$3 \geq 5 + 3$$

$$3 \geq 8$$

False

$$6 \geq -4 + 3$$

$$6 \geq -1$$

True

$\textcircled{3}$

$$5 = 3x + 2$$

$$\begin{array}{r} -2 \quad -2 \text{ subtraction!} \\ \hline 3 = 3x \end{array}$$

$$3 = 3x$$

$$\textcircled{4} \quad y + x > 2$$

$$y > -x + 2$$

- dashed line
- negative slope
- y-int 0, 2
- slope -1
- shade above

a) the line with a negative slope is solid, so can't be a)

$$y \leq 3x - 2$$

- solid line
- positive slope
- y-int 0, -2
- slope 3
- shade below

c) same as a)

d) shading is wrong side of both lines