

HW 14

p183 #1-3

2. a) $\frac{2}{3}x - 7 = 15$

$$\frac{\frac{2}{3}x}{\frac{2}{3}} = \frac{22}{\frac{2}{3}}$$

$$\boxed{x = 33}$$

b) $3|x+8|=21$
 $|x+8|=7$

$x+8=7$

$$\boxed{x = -1}$$

$x+8=-7$

$$\boxed{x = -15}$$

c) $2+5(x-1)^2=82$

$5(x-1)^2=80$

$(x-1)^2=16$

$x-1=\pm 4$

$x=1\pm 4$

$$\boxed{x = 5}$$

$$\boxed{x = -3}$$

d) $\sqrt{y-8}=7$

$y-8=49$

$$\boxed{y = 57}$$

e) $|x-3|+4=1$

$|x-3|=-5$

$$\boxed{\text{not possible}}$$

1. a) add 7 b) divide by 3 c) subtract 2 d) square both sides

e) subtract 6

3. a) $\frac{2}{3}(33)-7=15$
 $15=15\checkmark$

b) $3|-1+8|=21$

$3(7)=21\checkmark$

$3|-15+8|=21$

$3(7)=21\checkmark$

c) $2+5(5-1)^2=82$

$2+5(16)=82$

$82=82\checkmark$

$2+5(-3-1)^2=82$

$2+5(16)=82$

$82=82\checkmark$

d) $\sqrt{57-8}=7$

$\sqrt{49}=7$

$7=7\checkmark$

e) \checkmark