Pg. 585: 13-22 (a), 24-46 (e)

13 Y
14 Y
15 N
16 N
17 Y
18 N
19 Y
20 N
21 Y

22 Y
24 y^2-1
26 $9b^2-1$
28 $36-25n^2$
30 $a^2+16a+64$
32 $4y^2-16y+16$
34 $x^2-14x+49$
36 x^2-9

38 $n^2-8n+16$
40 $16n^2-24n+9$
42 $16x^2+40x+25$
44 $9y^2+48y+64$
46 $a^2-4ab+4b^2$

#26 $(3b-1)(3b+1)$

$3b(3b)+3b(1)=1(3b)-1(1)$

$9b^2+-1=9b^2-1$

10.4 Solving Quadratic Equations in Factor Form

April 24, 2007

factor form: a polynomial is in factor form when it is written as a product (multiply) of 2 or more factors.

$$(x+3)(x+4) = x^2+7x+12$$

Product of factors

Polynomial

$(x+3)(x+4) =$

$x^2+4x+3x+12$

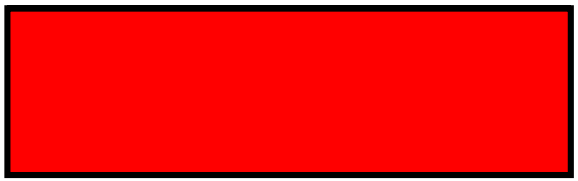
$x^2+7x+12$

Zero-Product Property

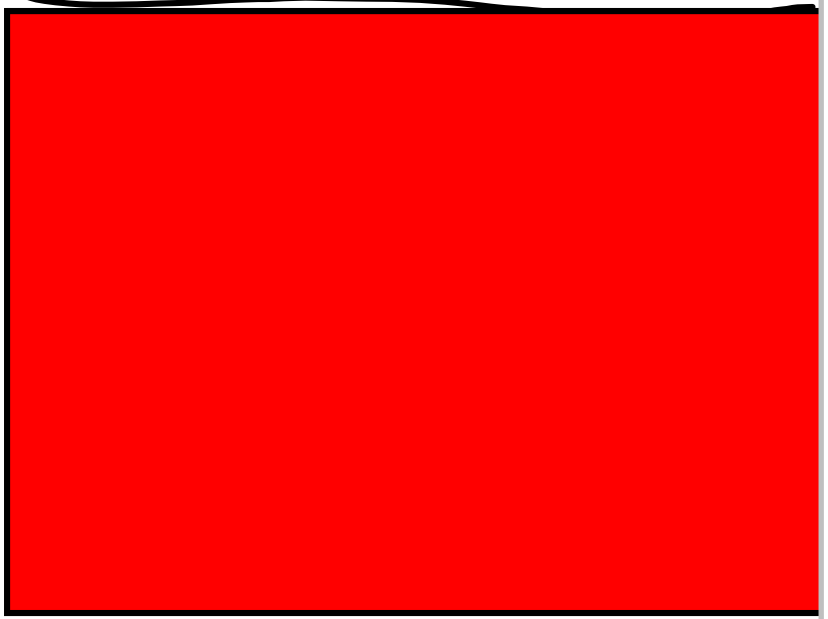
$a \cdot b = 0$

$\Updownarrow$

$a = 0$ or $b = 0$



when we Multiply 2 #'s that equal Zero, we know that At least One is equal to Zero!



ex 1

$(x+1)(x-3)=0$

$x+1=0$ or $x-3=0$

$-1\ -1$ $\quad$ $+3\ +3$

$x=-1$ or $x=3$

$(x+1)(x-3)=1x^2-2x-3=0$

$a=1$

$b=-2$

$c=-3$

$$x=\frac{-b\pm\sqrt{b^2-4ac}}{2a}$$

$$x=\frac{-(-2)\pm\sqrt{(-2)^2-4(1)(-3)}}{2(1)}$$

$$x=\frac{2\pm\sqrt{4+12}}{2}=\frac{2\pm\sqrt{16}}{2}=\frac{2\pm4}{2}$$

$x=\frac{2+4}{2}$ or $x=\frac{2-4}{2}$

$=\frac{6}{2}$ $\quad$ $=\frac{-2}{2}$

$x=3$ or $x=-1$

ex 2

$(x+6)^2 = 0$

$(x+6)(x+6) = 0$

$x+6=0$ or $x+6=0$

$-6\ -6$ $\quad$ $-6\ -6$

$x=-6$ or $x=-6$

$x=-6$

$\sqrt{(x+6)^2} = \pm\sqrt{0}$

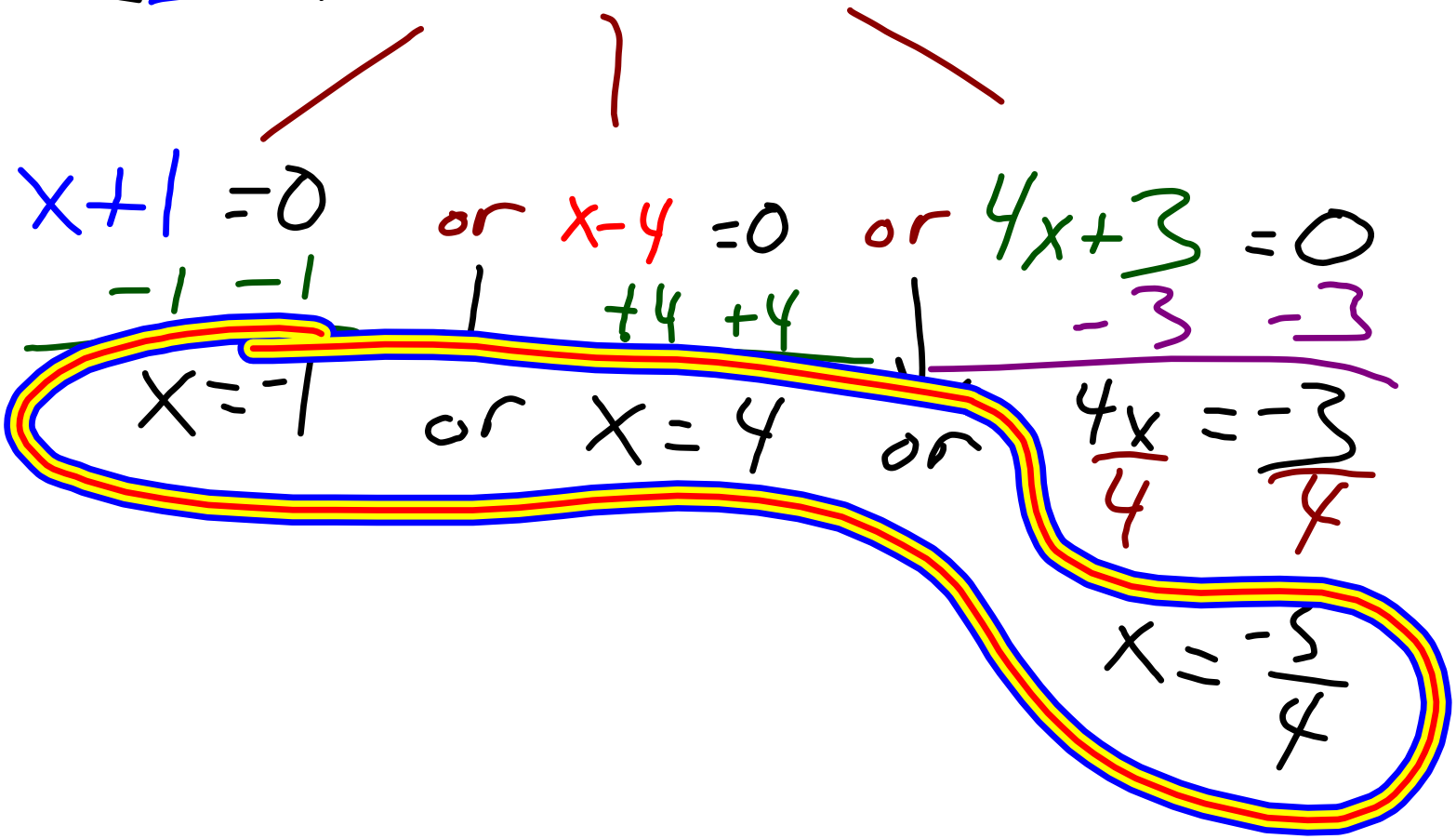
$x+6=0$

$-6\ \ -6$

$x=-6$

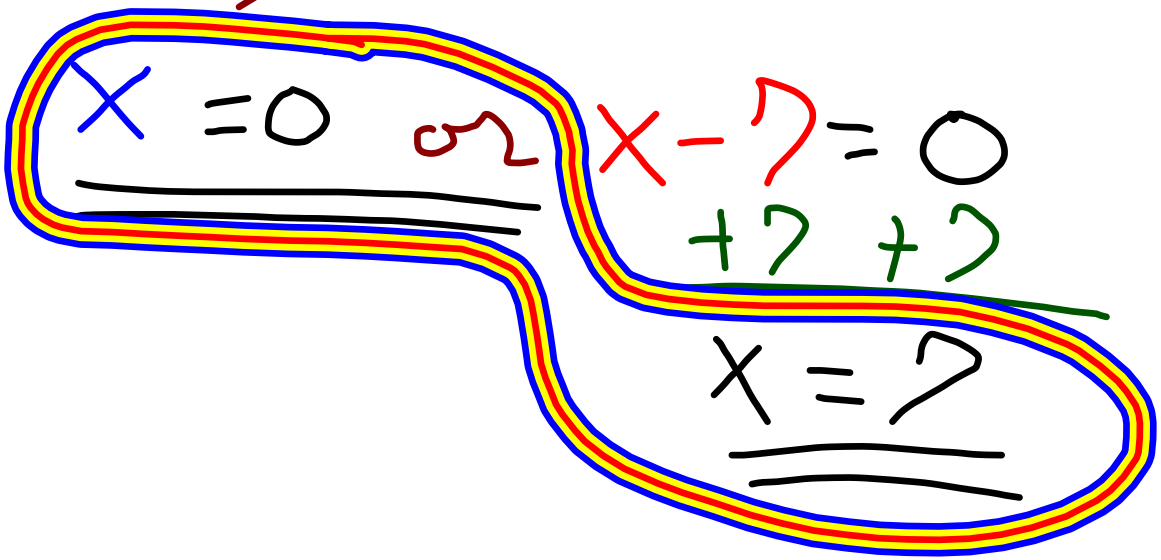
ex3)

$(x+1)(x-4)(4x+3)=0$



ex4)

$x(x-7)=0$



O.T.L.

① Pg 591: 14-28 (all)
30-36 (even)