

$x=4$
 $x=-7$
roots
(zeros)
(solutions)
(x-intercepts)

1 3 -28
 $m^2+3m-28=0$

The Product-Sum-T Method

	a · c	Sum → (Factors)	b
• What two numbers when multiplied give me	-28		3
[-28] but when I combine them gives me [3] [4+7]	-7 · 4 -28 · 1	-28	3

factors
(m-4)
(m+7)

$m-4=0$
 $m=4$
 $m+7=0$
 $m=-7$



• Rewrite the equation from 3 term to 4 terms by substituting the two new values in for the middle term.

$m^2+7m-4m-28=0$

← grouping

$m(m+7)-4(m+7)$

• factoring by grouping
X Pull out the greatest common factor

(the greatest largest thing shared!)

	a · c	b
$2x^2+5x-12$	$2(-12)$	5
$(2x+8x)(3x-12)$	-24	5
$2x(x+4)-3(x+4)$	$8 \cdot -3$	5

$(x+4)=0$
 $(2x-3)=0$

roots are $x=-4$
 $x=3/2$

