

T8-5 SQ

4/28/15

P6

Factor

Take out Stamp Sheet

1. $x^2 + 8x + 7$

1. $(x+7)(x+1)$

2. $x^2 - 11x + 10$

2. $(x-10)(x-1)$

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

3. $(x-2)(x+6)$

4. $8xy + 4xy^2$

4. $4xy(2+y)$

Notes T8-5 Continued w/T8-4 GCF

$2x^2 + 6x - 108$

+ look for smallest #
& see if I can divide
by it. If Yes - factor out.

$2(\frac{2x^2}{2} + \frac{6x}{2} - \frac{108}{2})$

$a=1 \quad b=3 \quad c=-54$

$2(x^2 + 3x - 54)$

$2(x-6)(x+9)$

factor factor factor

c	b
-54	3
2 · -27	
-2 · 27	
-3 · 18	
3 · -18	
-6 · 9	-6+9=3
6 · -9	

$2(x-6)(x+9)$

$(2x-12)(x+9)$

$2x^2 + 18x - 12x - 108$

$2x^2 + 6x - 108$

You try:

Factor

1. $2x^2 + 22x + 60$

$2(x+5)(x+6)$

2. $5x^2 - 30x + 40$

$5(x-2)(x-4)$

$2 \cdot 4 \cdot x \cdot y + 4 \cdot x \cdot y \cdot y$

$4xy \left(\frac{2 \cdot 4 \cdot xy}{4xy} + \frac{4xyy}{4xy} \right)$

$4xy(2+y)$

$2(x+7) + x(x+7)$
factor factor factor

$(x+7) \left(\frac{2(x+7)}{(x+7)} + \frac{x(x+7)}{(x+7)} \right)$

$(x+7)(2+x)$

$3x(x+5) - 7(x+5)$

$(x+5)(3x-7)$

$(3x-7)(x+5)$

$$1. 5x(x-3) + 2(x-3)$$

$$(x-3)(5x+2)$$

$$2. m(n+q) - 5(n+q)$$

$$(n+q)(m-5)$$

$$5(7-c) + x(c-7)$$

when they are so close see if factoring a neg one makes it the way you want

$$(7-c)$$

1. Change order (put var 1st)

$$(-c+7)$$

2. Factor out -1

$$-1\left(\frac{-c}{-1} + \frac{7}{-1}\right)$$

$$\boxed{-1(c-7)}$$

$$\Delta -1(5)(c-7) + x(c-7)$$

$$(c-7)(-5+x)$$

$$(x+5) = -1\left(\frac{x}{-1} + \frac{5}{-1}\right) = \boxed{-1(-x-5)}$$

$$(9-x) = (-x+9) = \boxed{-1(x-9)}$$

$$(X+10) \rightarrow -1 \left(\frac{X}{1} + \frac{10}{1} \right) = -1(-X-10)$$