

Ch 9.5

Factoring Trinomials of
 x^2+bx+c

Factoring Trinomials where a=1

- To factor a tri. in the form x^2+bx+c , find 2 #s that have a product of c & a sum of b .
- List the factors of c & find the 2 #s that = b

Ex. $g^2 + 7g + 10$

+10 +7

product/sum

1, 10 / 11 NO

2, 5 / 7 YES

$(g+2)(g+5)$

*Use FOIL to check your answer.

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Ex 2: $m^2 + 8m - 20$

-20 +8

product/sum

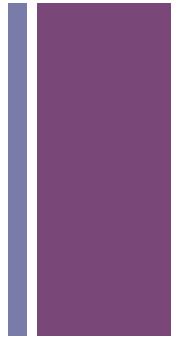
-1, 20 / 19 NO

(bigger # positive)

-2, 10 / 8 YES

-4, 5 / 1 NO

$(m-2)(m+10)$



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Ex 3: $p^2 - 3p - 40$

(bigger # negative)

-40 -3

product/sum

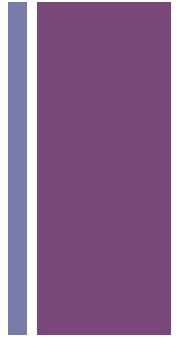
1, -40 / -39 NO

2, -20 / -18 NO

4, -10 / -6 NO

5, -8 / -3 YES

$(p-8)(p+5)$



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-48 +2

Ex 4: $x^2 + 2xy - 48y^2$ product/sum

(bigger # positive)

-1, 48 / 47 NO

-2, 24 / 22 NO

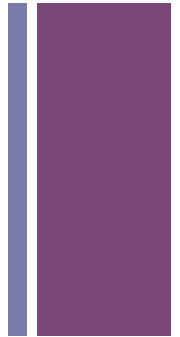
-3, 16 / 13 NO

-4, 12 / 8 NO

-6, 8 / 2 YES

$(x-6y)(x+8y)$

*Make sure to include last variable



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- **Try Some**

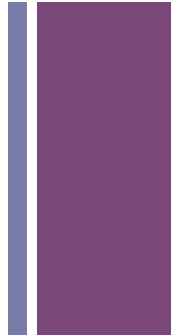
Factor each expression. (check your answer)

1. $x^2 + 8x + 15$

2. $c^2 - 9c + 20$

3. $x^2 + 13x - 48$

4. $n^2 - 5n - 24$



+

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5. $y^2 - 15y + 36$

6. $c^2 - 13c - 30$

7. $x^2 + 11xy + 24y^2$

8. $d^2 + 17dg - 60g^2$

