

- | | | | |
|----|----------------|----|--------------------|
| 19 | A | 35 | $(3c-4)(c-11)$ |
| 20 | $(6y+1)(y-5)$ | 37 | $(2t+7)(3t-10)$ |
| 21 | A | 39 | $(2y-5)(4y-3)$ |
| 23 | $(3t+1)(t+5)$ | 42 | $-\frac{5}{2}, 7$ |
| 25 | $(2a+1)(3a+1)$ | 43 | $\frac{3}{2}, 1$ |
| 27 | $(6b+1)(b-2)$ | 44 | $-\frac{1}{3}, 11$ |
| 29 | $3(x+1)(2x-5)$ | 45 | $-\frac{1}{4}, 5$ |
| 31 | $(2z-1)(z+10)$ | 46 | $\frac{1}{2}, -1$ |
| 33 | $(4x+7)(x+5)$ | 47 | $\frac{1}{3}, -2$ |

10.7 Factoring Special Products

April 27, 2007

* Part of the
Mastery Test

Recall Product of Sum & Diff.

$$(x+3)(x-3) = \underbrace{x^2 - 9}_{a^2 - b^2}$$

* Perfect Square (P^s) Minus P^s

$$a^2 - b^2 = \underline{\underline{(a+b)(a-b)}}$$

Recall

Square of a Binomial

$$(x+5)^2 = x^2 + 10x + 25$$

$$(a+b)^2$$

$$a^2 + 2ab + b^2$$

} w/
Addition

← Factor

$$(x-4)^2 = x^2 - 8x + 16$$

$$a^2 - 2ab + b^2$$

} w/
Subt.

← Factor

Factor $p^2 - p^2$

ex1) $m^2 - 4 = (m+2)(m-2)$

ex2) $4p^2 - 25 = (2p+5)(2p-5)$

ex3) $r^2 - 20 = \text{Not Factorable}$

ex4) $9m^2 - 121 = (3m+11)(3m-11)$

Factor

ex5) $a^2 - 2ab + b^2$

$$x^2 - 4x + 4 = \underline{\underline{(x - 2)(x - 2)}}$$

ex6) $a^2 + 2ab + b^2$

$$a^2 + 18a + 81 = \underline{\underline{(a + 9)(a + 9)}}$$

Factor

G.C.F.? 2

ex) $\sqrt{\quad}$

$$50 - 98x^2$$

$$2(25 - 36x^2)$$

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

Factoring

① G.C.F.

② $p^s - p^s$

③ $a^2 \pm 2ab + b^2$

④ $\begin{array}{ccc} _ & + & _ & + & _ \\ _ & - & _ & + & _ \end{array}$

Factor + Solve

ex 8

$$2n^2 - 288 = 0$$

G.C.F.
2

$$2(n^2 - 144) = 0$$

$$2(n+12)(n-12) = 0$$

~~2=0~~ ∴ $n+12=0$ or $n-12=0$
 $-12-12$ $+12+12$

$$\underline{\underline{n = -12 \text{ or } n = 12}}$$

O.T.L.

① Pg. 613-614: 18-26(e)
27-31(o)
40-58(e)