Factoring Polynomials Review

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Greatest Common Factor for 100.

Factor \(2x - 10\) completely

\[2(x - 10)\]

\[2(5)\]

\[2(x - 5)\]

\[2x - 10\]

none of the above
Greatest Common Factor for 200.

Factor $15a^2b - 10ab^2$ completely

$5(3a^2b - 2ab^2)$

$5ab(3a - 2b)$

$5ab(3ab - 2ab)$

$15a^2b - 10ab^2$

none of the above
Greatest Common Factor for 300.

Factor $10m^3n^3 - 2mn^2 + 14mn$ completely

$10m^3n^3 - 2mn^2 + 14mn$

$2(5m^3n^3 - 2mn^2 + 14mn)$

$2mn(5m^3n^3 - 2mn^2 + 14mn)$

$2mn(5m^2n^2 - 2n^2 + 7)$

none of the above
Greatest Common Factor for 400.

Factor \( 4a^2b^2 + 16ab + 12a \) completely

\[
4a(ab^2 + 4b + 3)
\]
\[
4ab(ab + 4 + 3b)
\]
\[
2ab(2ab + 8 + 6b)
\]
\[
4a^2b^2 + 16ab + 12a
\]

none of the above
Leading Coefficient = 1 for 100.

Factor $x^2 + 7x + 12$

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

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

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

$(x - 3)(x - 4)$

none of the above
Leading Coefficient=1 for 200.

Factor $w^2 - w - 6$

$(w - 2)(w - 3)$
$(w + 2)(w - 3)$
$(w + 2)(w + 3)$
$(w - 2)(w + 3)$
none of the above
Leading Coefficient = 1 for 300.

Factor $z^2 - z - 182$

$(z + 13)(z + 14)$

$(z - 13)(z - 14)$

$(z - 13)(z + 14)$

$(z + 13)(z - 14)$

none of the above
Leading Coefficient = 1 for 400.

Factor \(-4 - 3m + m^2\)

\((m + 4)(m + 1)\)
\((m - 1)(m - 4)\)
\((-4 + m)(1 + m)\)
\((-4 + m)(1 - m)\)

none of the above
Leading coefficient $\neq 1$ for 100.

Factor $2x^2 + 5x + 2$

$(x + 1)(x + 4)$
$(x + 2)(2x + 1)$
$(x + 1)(2x + 2)$
$(x + 1)(x + 2)$
none of the above
Leading coefficient $\neq 1$ for 200.

Factor $2x^2 - 11x + 15$

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

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

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

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

none of the above
Leading coefficient \( \neq 1 \) for 300.

Factor \( 15n^2 - n - 28 \)

\[(3n - 4)(5n - 7)\]
\[(3n + 4)(5n + 7)\]
\[(3n - 4)(5n + 7)\]
\[(3n + 4)(5n - 7)\]

none of the above
Leading coefficient \( \neq 1 \) for 400.

Factor \( 12q^2 + 34q - 28 \)

\[
2(2x + 7)(3x - 2) \\
(4x - 7)(3x + 4) \\
(2x - 7)(6x + 4) \\
(x - 4)(12x + 7) \\
\text{none of the above}
\]
Potpourri for 100.

Factor $3p^2 - 147$ completely

$3(p^2 - 49)$

$3(p - 7)^2$

$3(p - 7)(p + 7)$

$3(p + 7)^2$

none of the above
Potpourri for 200.

Factor $6t^3 - 14t^2 - 12t$ completely

$2t(t + 3)(3t + 2)$

$2t(t - 2)(3t + 3)$

$2t(t - 2)(3t - 3)$

$2t(t - 3)(3t + 2)$

none of the above
Potpourri for 300.

Factor $16c^2 + 72cd + 81d^2$

$(4c + 9d)^2$

$(2c + 3d)(8c + 27d)$

$(4c + 3)(4c + 27d)$

$(2c + 27d)(8c + 3d)$

none of the above
Potpourri for 400.

Factor $w^4 - 12w^2 - 45$

$(w - 3)(w - 15)$

$(w^2 - 3)(w^2 - 15)$

$(w + 3)(w - 15)$

$(w^2 + 3)(w^2 - 15)$

None of the above
Stupid Questions for 100.

\[ x^2 + 3x + 2 = (x + 1)(x + 2), \quad (x + 1) \text{ and } (x + 2) \]

are called

groups
products
factors
pairs
none of the above
Stupid Questions for 200.

$x^2 + 81$ is factorable.

Yes, it’s $(x + 9)(x + 9)$

Yes, because it’s sum of two squares

No, difference of two squares can be factored, but not sum of two squares.

No. A difference of squares is factorable but not a sum.

none of the above
Stupid Questions for 300.

\[ x^2 + 8x + 15 \text{ can be solved} \]

Of course! \( x^2 + 8x + 15 \) can be factored, so there are solutions.

Of course! Because I can guess and check for the value of \( x \).

No! It is not factorable

No! It is an expression, and not an equation.

none of the above
Stupid Questions for 400.

Factoring is the only way to solve quadratic equations

Yes. How else can you solve for the variable?

Yes. If you can’t factor, then there are no solutions.

No. There are other ways such as using the quadratic formula.

No. You can always guess and check.

None of the above