Answer key

The method: Factoring out the GCF

Find the greatest factor shared by every term. Write it outside the parentheses.

$10x^2 + 6x = 2x(5x) + 2x(3) = 2x(5x + 3)$ the GCF of every term is $2x$

$3x + 3 = 3(x) + 3(1) = 3(x + 1)$ the GCF of every term is 3

Problems 1 and 2 worked out · Version 0A

$16x^3 - 40x^2 = 8x^2(2x) + 8x^2(-5) = 8x^2(2x - 5)$ the GCF of every term is $8x^2$

$5x^3 - 5x^2 + 45x = 5x(x^2) + 5x(-x) + 5x(9) = 5x(x^2 - x + 9)$
the GCF of every term is $5x$

Factoring out the GCF · Version 0A

1) $8x^2(2x - 5)$ 2) $5x(x^2 - x + 9)$ 3) $6(5x + 3)$
4) $5(2x^2 - 7)$ 5) $6x(4x^2 - 2x - 5)$
6) $6x(6x^2 - 8x - 3)$ 7) $4(6x - 5)$
8) $3(2x^2 + 3x + 2)$ 9) $7x(5x - 3)$ 10) $7(4x + 9)$
11) $5(6x^2 - 3x + 7)$ 12) $2x^2(2x - 7)$
13) $2x(4x^2 + 9x + 7)$ 14) $2x(x^2 - 5x - 9)$
15) $5x^2(3x^2 + 8)$ 16) $8x^2(6x - 7)$ 17) $5x^2(5x + 8)$
18) $4x(3x^2 - 6x + 7)$ 19) $5x(4x^2 - 5x + 2)$
20) $6(x - 5)$ 21) $5(4x - 3)$