Practice Run

Express the following quadratic functions in factored form. Show your work.

1. $y = 2x^2 - 14x + 24$

2. $f(x) = -3x^2 + 9x + 84$

3. $f(x) = 2x^2 - x - 3$

Compare your answers.

Express the following quadratic functions in factored form. Show your work.

1. $y = 2x^2 - 14x + 24$

$y = 2x^2 - 14x + 24$
$y = 2(x^2 - 7x + 12)$

Sum of –7	Product of 12
$-3 + -4$	$(-3)(-4)$

$y = 2(x - 3)(x - 4)$

2. $f(x) = -3x^2 + 9x + 84$

$f(x) = -3x^2 + 9x + 84$
$f(x) = -3(x^2 - 3x - 28)$

Sum of –3	Product of –28
$4 + -7$	$(4)(-7)$

$f(x) = -3(x + 4)(x - 7)$

3. $f(x) = 2x^2 - x - 3$

$y = 2x^2 - x - 3$

Sum of –1	Product of –6
$-3 + 2$	$(-3)(2)$

$y = 2x^2 - 3x + 2x - 3$
$y = (2x^2 - 3x) + (2x - 3)$
$y = x(2x - 3) + 1(2x - 3)$
$y = (2x - 3)(x + 1)$