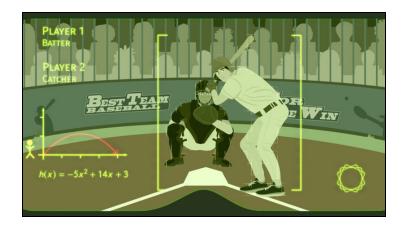Printable Worksheets from sofatutor.com

Factoring Trinomials with a ≠ 1

(1) **Identify the standard form of a quadratic function.**

(2) Factor the quadratic function: $h(x) = 2x^2 + 4x - 6$

(3) Determine when a ball will land by using a quadratic function.

(4) Use the box method to factor $h(x) = 4x^2 + 7x - 2$.

(5) Factor the quadratic function $h(x) = -3x^2 + 4x + 4$.

(6) Find the factored form of each function written in standard form.

(+) with lots of tips, answer keys, and detailed answer explanations for all of the problems.

⚠ The complete package, **including all problems, hints, answers, and detailed answer explanations** is available for all sofatutor.com subscribers.
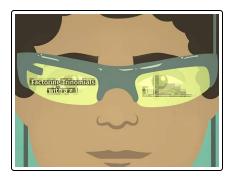
Identify the standard form of a quadratic function.

Select the equation that is in standard form.

Samuel hopes that his specially engineered glasses will help him get a spot on the baseball team. The glasses analyze a baseball as the batter hits it. They find a quadratic function that represents the height of the baseball as a function of time. By solving this equation, the glasses can tell Samuel exactly when the baseball will hit the ground.

In order to solve the quadratic function, the glasses must convert the standard form of a quadratic function to the factored form. Select the equation below that is in standard form.

A

$h(x) = ax^2 + bx + c$

B

$h(x) = (x - a)(x - b)$

C

$h(x) = m(x - a)(x - b)$

D

$h(x) = a(x - h)^2 + k$

Hints for solving these problems

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Identify the standard form of a quadratic function.

Hint #1

Remember, the standard form has not been factored.

Hint #2

The standard form is simplified as much as possible.

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Answers and detailed answer explanations for these problems

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Identify the standard form of a quadratic function.

Answer key: A

The function $h(x) = ax^2 + bx + c$ is in standard form.

The functions $h(x) = (x - a)(x - b)$ and $h(x) = m(x - a)(x - b)$ are both in factored form. The factored form of a quadratic function provides the values of x at which the function is equal to zero. These are called the roots, and are equal to a and b. The second function is a special case of the third function, where $m = 1$.

The function $h(x) = a(x - h)^2 + k$ is in vertex form.

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