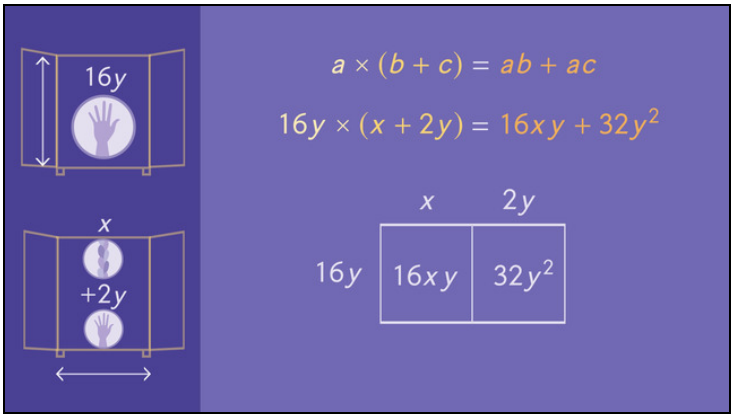
Printable Worksheets from sofatutor.com

Multiplying Polynomials



1 **Decide which statements are true about the FOIL method.**

2 Multiply two binomials using the FOIL method.

3 Determine the area of Rap-Punzel's closet.

4 Calculate the area of the bed using the area model.

5 Check the area model for the given products.

6 Solve the following products.

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

Decide which statements are true about the FOIL method.

Choose the correct statement.

FOIL

FOIL means:

Multiply the **F**irst,

Multiply the **O**uter,

Multiply the **I**nner, and

Multiply the **L**ast.

- [ ] **A** The FOIL method only works with two monomials.
- [ ] **B** The FOIL method only works with one monomial and one binomial.
- [ ] **C** The FOIL method only works with one monomial and one trinomial.
- [ ] **D** The FOIL method only works with two binomials.
- [ ] **E** The FOIL method only works with two trinomials.
- [ ] **F** The FOIL method only works with one binomial and one trinomial.

Hints for solving these problems

1 of 6

Decide which statements are true about the FOIL method.

Hint #1

$$8y \times (6y + 5) = 48y^2 + 40y$$

Here is an example for the distributive property:

Hint #2

A monomial is a single term; for example $3x$.

An example of a binomial is $3x - 4y$, which is composed of two monomials.

A trinomial is composed of three monomials, like $3x - 4y + 4$.

Hint #3

F - multiply the first:	$(8y)(6y) =$	$48y^2$
O - multiply the outer:	$(8y)(5) =$	$40y$
I - multiply the inner:	$(7)(6y) =$	$42y$
L - multiply the last:	$(7)(5) =$	35

Here is an example of the FOIL method with $(8y + 7) \times (6y + 5)$:

Answers and detailed answer explanations for these problems

1 of 6

Decide which statements are true about the FOIL method.

Answer key: D

The FOIL method only works for two binomials.

Let's have a look at an example:

$(8y+7)\times(6y+5)=\ldots$

F multiply the first $(8y)(6y)=48y^2$

O multiply the outer $(8y)(5)=40y$

I multiply the inner $(7)(6y)=42y$

L multiply the last $(7)(5)=35$

If we only have two monomials we don't have inner or outer terms.

To multiply a monomial with a binomial we use the distributive property. For example, $8y\times(6y+5)=48y^2+40y$.