12 Factor:
$$(x^{3} + 3x^{2}) + (2x + 6)$$

F $x(x^{2} + 3x + 8)$
G $x(x^{2} + 3x + 2)$
H $(x + 3)(x^{2} + 2)$
J $(x + 2)(x^{2} + 3)$
 $\chi^{2}(x + 3) + \lambda(x + 3)$
 $\chi^{2}(x + 3) + \lambda(x + 3)$
 $(x^{2} + 3) + \lambda(x + 3)$





I can and I will multiply rational expressions.

Holt Algebra 1

The rules for multiplying rational expressions are the same as the rules for multiplying fractions. You multiply the numerators, and you multiply the denominators.

Watch This!

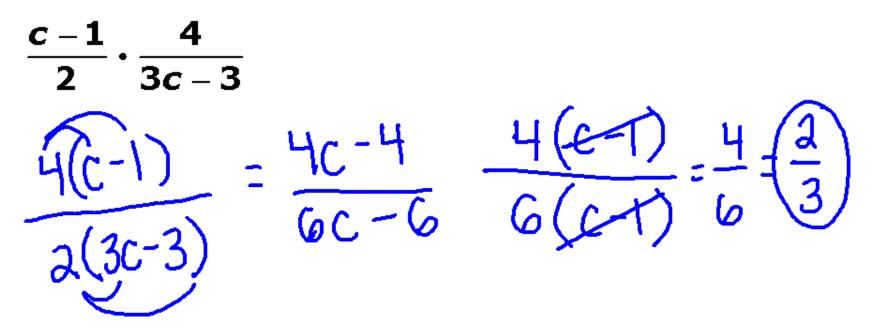
Multiply. Simplify your answer.

$$\frac{a+3}{2} \cdot \frac{6}{3a+9}$$

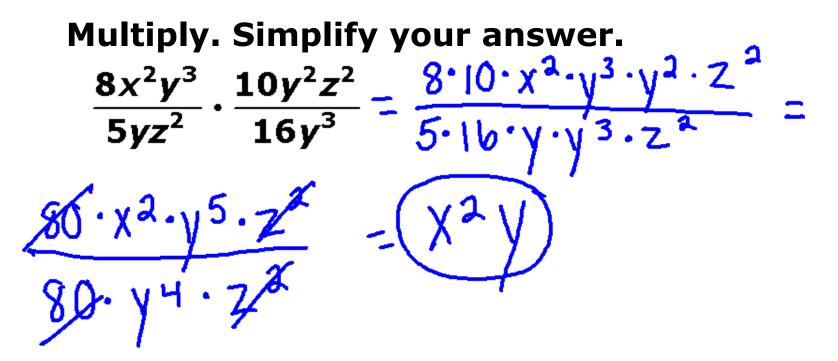
$$\frac{6(a+3)}{2(3a+q)} \cdot \frac{4a+18}{6q+18} = (1)$$

Ex 1)

Multiply. Simplify your answer.

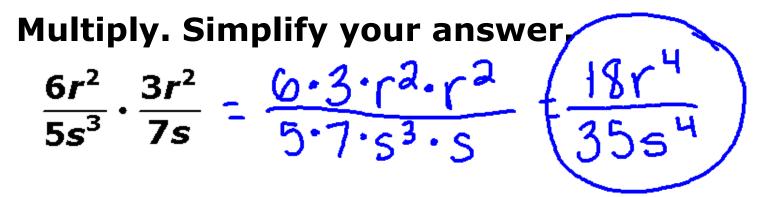


Ex. 2)



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Ex. 3)



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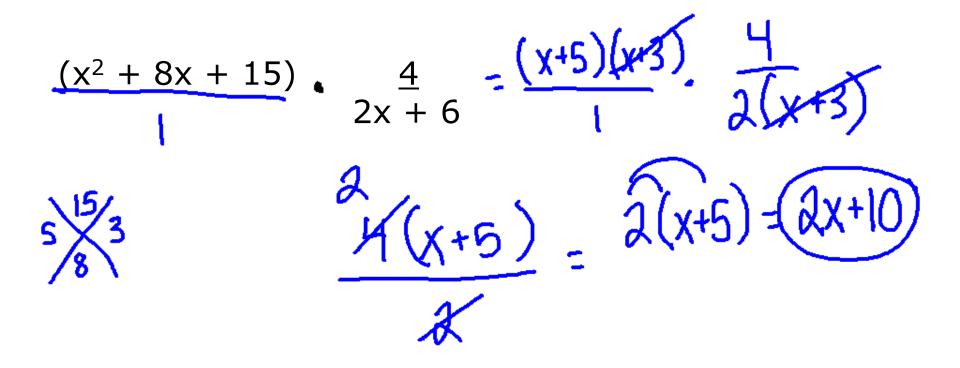
Remember!

See the Quotient of Powers Property in Lesson 7-4.

$$\frac{a^m}{a^n} = a^{m-n}$$

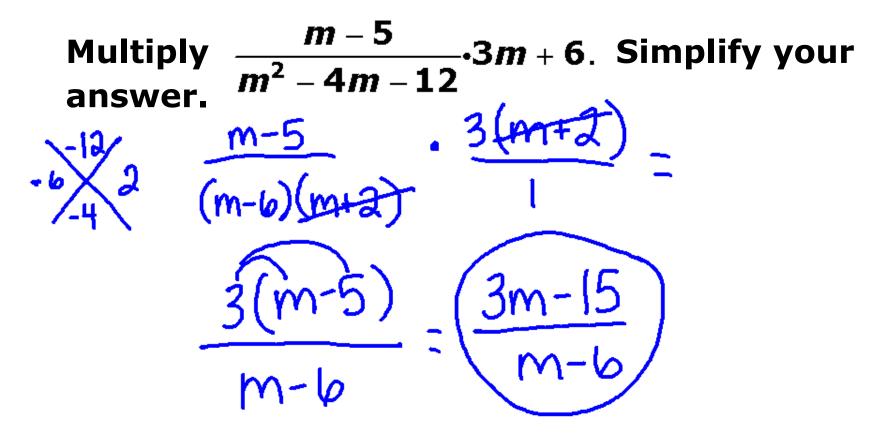
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Watch This!



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Ex. 4



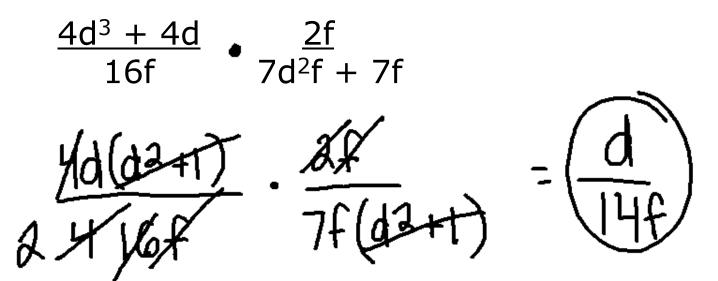
Remember!

Just as you can write an integer as a fraction, you can write any expression as a rational expression by writing it with a denominator of 1.

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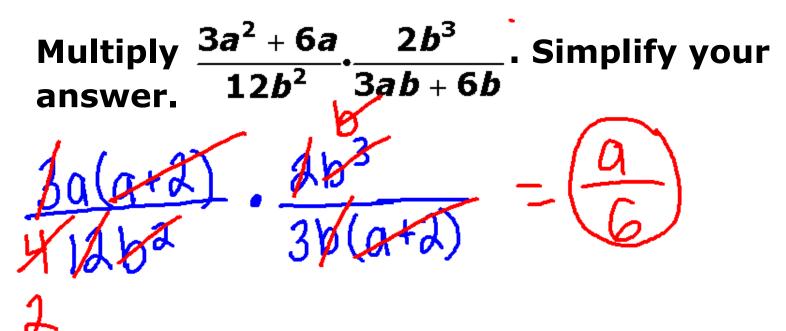
There are two methods for simplifying rational expressions. You can simplify first by dividing out and then multiply the remaining factors. You can also multiply first and then simplify. Using either method will result in the same answer.

Watch This!



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Ex. 5)





Multiply $\frac{n-5}{n^2+4n} \cdot \frac{n^2+8n+16}{n^2-3n-10}$ (n+4)(n+4) = n+4 = (n+5)(n+2) = n(n+2)

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Practice!

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