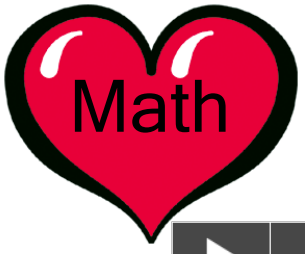
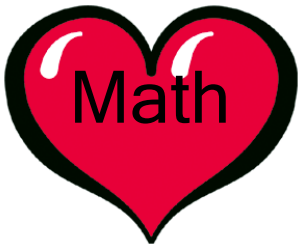
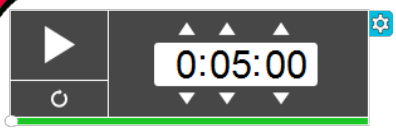
Warm-Up
Grade 9







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Try these:

$\frac{36p + 45q - 81}{9}$

$3(2x - 6y + 2z)$

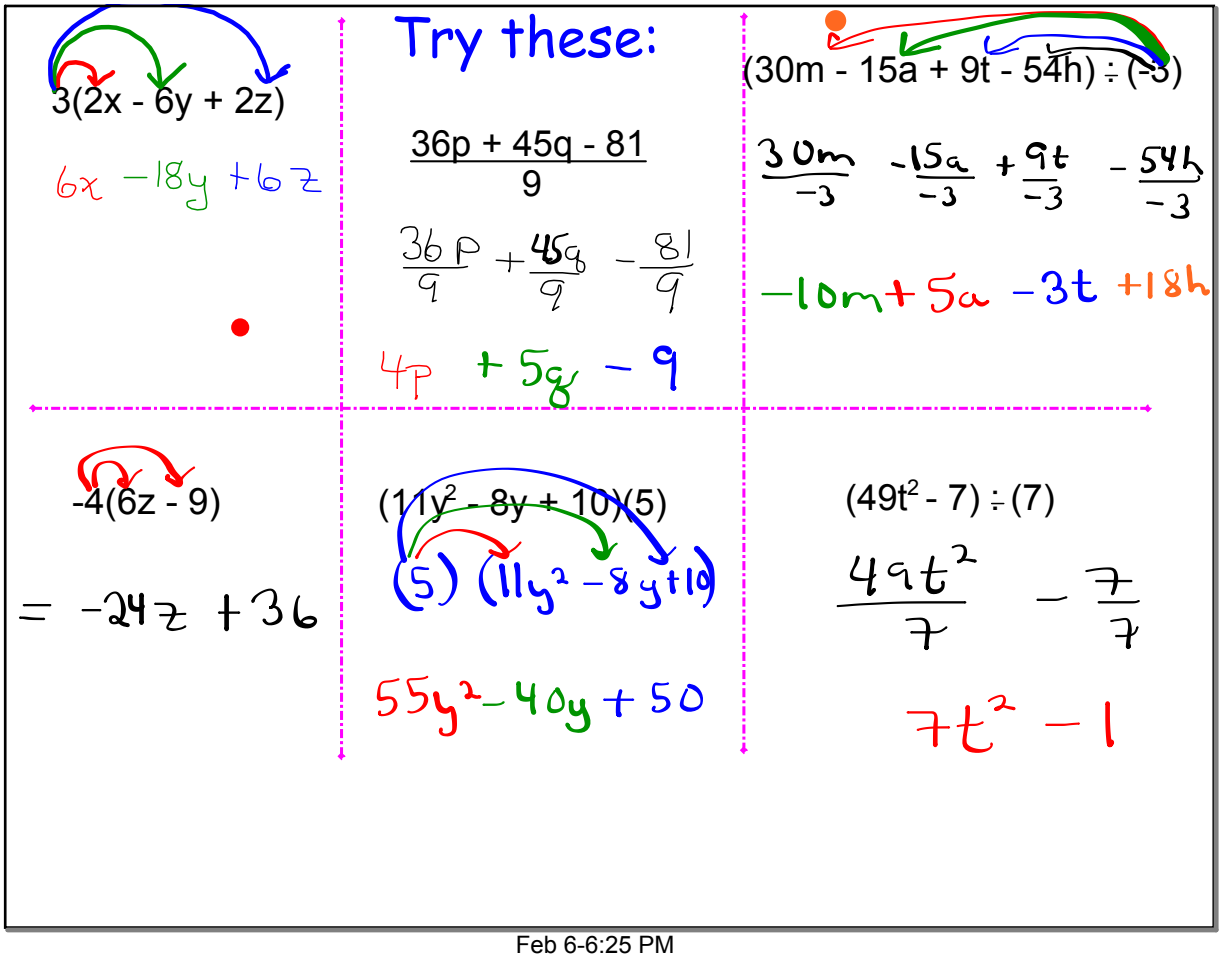
$(30m - 15a + 9t - 54h) \div (-3)$

$-4(6z - 9)$

$(11y^2 - 8y + 10)(5)$

$(49t^2 - 7) \div (7)$

Feb 6-6:25 PM



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SOME REVIEW

Laws of Exponents

Remember... b^x → "b raised to the power of x" where, b – base, x – exponent

#1. PRODUCT - when multiplying...
"if the base is the same, then ADD the exponents."

$$b^m \times b^n = b^{m+n}$$

example:

$2^5 \times 2^6 =$

$= 2^{11}$

$(x^7)(x^3) =$

$= x^{10}$

#2. QUOTIENT - when dividing...
"if the base is the same, then SUBTRACT the exponents."

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

example

$\frac{2^7}{2^4} = 2^3$

$\frac{x^8}{x^6} = x^2$

Feb 7-9:09 PM

Multiplying a Monomial by a Monomial

Note:

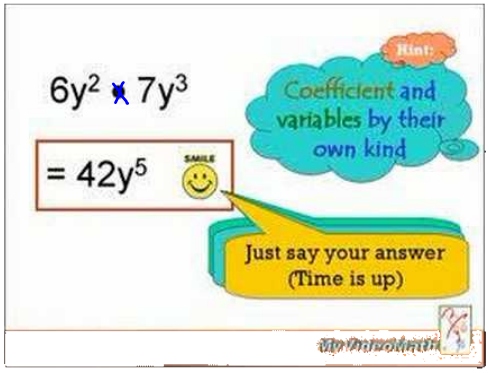
Multiply coefficients with coefficients and variables with variables

Follow exponent laws for variable with the same base

$(11)(5y^2)$ $= 55y^2$

$(-7n)(5n)$ $= -35n^2$

$(8m^3)(4m^2x)$ $= 32m^7x$



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Multiplying a Binomial by a Monomial

$(6x + 3)(5y)$

$3 \times 5 = 5 \times 3$

Each term inside the bracket must be multiplied by the monomial outside the brackets.

$(5y)(6x+3)$

Still coefficients with coefficients and variables with variables.

$30xy + 15y$

$5y(6x) + 3(5y)$

$30xy + 15y$

Feb 7-9:15 PM

You Try!

3) $6k^2(8fk^3 - 7k^5)$

$48k^5f - 42k^7$

Dec 10-9:02 AM

Dividing a Monomial by a Monomial

Note:

Divide coefficients with coefficients and variables with variables

Follow exponent laws for variable with the same base

1) $\frac{-8x^2}{2x^1}$

$= -4x$

2) $\frac{150y^5}{25y^2}$

$= 6y^3$

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Dividing a Binomial by a Monomial

$$\frac{24p^2 - 14p}{2p}$$

Each term on the numerator must be divided by the monomial on the denominator.

Recall: coefficients with coefficients and variables with variables.

$$\frac{24p^2}{2p} - \frac{14p}{2p}$$

$$= 12p - 7$$

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You Try!

1) $$\frac{72x - 48x^2}{12x}$$

$$= \frac{72x^1}{12x^1} - \frac{48x^2}{12x}$$

$$= 6 - 4x$$

Feb 13-11:25 PM