computer

Test

computer

Testing the pen!

1. write
2. select
3. send a

PDF

MB 6.2 Solving Equations Using Algebra

Name _____

Blk _____

Review

expression

$4x - 9 = 27$

equation

Terms

Terms +/−/= separated by *+/−/=

same equation

$-6 + 4x = 54$

$4x - 6 = 54$

$54 = -6 + 4x$

Example: $5x + 6 = 31$

$-6 \quad -6$

$5x = 25$

$\div 5 \quad \div 5$

$x = 5$

1) circle terms
2) +/− terms, do opposite
3) ×/÷ terms, do opposite
4) Check!!

$5(5) + 6 = 31$

$25 + 6 = 31$

$31 = 31$ ✓

New

* If you move a term to the other side of an equals sign, it's pos/neg (+/−) value switches

− ⟹ +

+ ⟹ −

$4x - 6 = 54$

$+6 \quad +6$

$4x = 54 + 6$

$4x = 60$ ...

Ex: $3b + 5 = 14$

$-5 \quad -5$

$3b = 14 - 5$

$3b = 9$

$\div 3 \quad \div 3$

$b = 3$

1) circle terms
2) move terms away from variable
3) solve w/ Algebra
4) check!!

$3(3) + 5 = 14$

$9 + 5 = 14$

$14 = 14$ ✓

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Ex 2 $16t - 69 = -13$

-69 $+69$

1) circle terms
2) move terms
3) solve w/ Algebra
4) check!!

$16t = -13 + 69$

line in fraction means divide!

$\frac{16t}{16} = \frac{56}{16}$

$t = \frac{56}{16} = 3.5 = \frac{7}{2}$

$16(3.5) - 69 = -13$

$56 - 69 = -13$

$-13 = -13$ ✓

Practice → Moving Terms and Solving for X

1) $-4x + 6 = -34$

1) circle terms
2) isolate variable
3) solve w/ Algebra
4) check

$-4x = -34 - 6$

$\frac{-4x}{-4} = \frac{-40}{-4}$

$x = 10$

$-4(10) + 6 = -34$

$-40 + 6 = 34$

$-34 = -34$ ✓

2) $-49 = -14x + 91$

$-49 - 91 = -14x$

$\frac{-140}{-14} = \frac{-14x}{-14}$

$10 = x$

pdf / pdf

$-49 = -14(10) + 91$

$-49 = -140 + 91$

$-49 = -49$ ✓

3) $275 - 6x = 215$

$-6x = 215 - 275$

$\frac{-6x}{-6} = \frac{-60}{-6}$

$x = 10$

$275 - 6(10) = 215$

$275 - 60 = 215$

$215 = 215$ ✓

Y8 6.3 Solving Equations using Fractions (division)

Name _____

Blk _____

Review Identify terms in Expressions or Equations

↳ Terms R separated by +/-/= signs

Ex $6x - 4 = 26$ → $26 = -4 + 6x$

terms

Solving for X (Algebra)

$-4 = 26 - 6x$

$-26 \quad -26$

$-30 = -6x$

$\div -6 \quad \div -6$

$\boxed{+5 = x}$

or

$-4 \div 26 - 6x$

$-26 \quad +26$

$-26 - 4 = -6x$

$-30 = -6x$

$\div -6 \quad \div -6$

$\boxed{5 = x}$

check! $-4 = 26 - 6(5)$

$-4 = 26 - 30$

$\boxed{-4 = -4}$ ✓

New *The line in a fraction means divide!*

Ex 1 Grandpa has enough gift cards to give an equal # to each of his 4 grandchildren. Grandpa gave every child 5 gift cards, how many did he start with?

1) Let X = starting # g.c.

$4 \cdot \frac{X}{4} = (5) \cdot 4$

$\boxed{X = 20}$

1) circle terms
2) +/- terms
3) ×/÷ terms
4) check!

pdf $\frac{X}{4} \cdot \frac{4}{1} = \frac{4X}{4} = X$

$\frac{(20)}{4} = 5$ $\boxed{5 = 5}$ ✓

Ex 2: Bob bought a box of 40 shirts. He added $6 to the cost of each shirt, and sold each shirt for $26. How much did the box of 40 shirts cost Bob?

1) Let X = cost of box

1) circle terms
2) +/−
3) ×/÷

2) $\frac{X}{40} = 26 - 6 \rightarrow 40 \cdot \frac{X}{40} = 20 \cdot 40$ 4) check!

$X = 800$

$\frac{800}{40} = 20$

$20 = 20$ ✓

Ex 3: $\frac{3}{-3} + \frac{n}{7} = \frac{18}{-3}$

1) circle terms
2) +/− terms, opposite
3) ×/÷ terms, opposite
4) check!

$7 \cdot \frac{n}{7} = 15 \cdot 7$

$70 + 35$

$n = 105$

$3 + \frac{(105)}{7} = 18$

$3 + 15 = 18$

$18 = 18$ ✓

HW: A 3, 4, 7

B 8, 9, 10

C 12, 14

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Solve and Check!!

M8 6.4 The Distributive Property

Review Algebra - "Solving for x"

1) circle the terms
2) start +/− terms (near x); do opposite
3) next ×/÷ terms (w/ x-term); do opposite
4) Check your Answer!!! (replace variable w/answer check 4 true statement)

Ex $\frac{x}{6} + 5 = 12$

$-5 \quad -5$

$6 \cdot \frac{x}{6} = 7 \cdot 6$

$x = 42$

$\frac{(42)}{6} + 5 = 12$

$7 + 5 = 12$

$12 = 12$ ✓

$7 = 7$ ✓

New Distributive Property! Super Important ^ ^

$3 \times 6 \rightarrow 3(4+2)$ $(3 \cdot 4) + (3 \cdot 2) = 18$

$12 + 6$

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$3 \times (4 + 2) = 18$

3	4	2
	12	6

Ex 1 $7 \times 15 \rightarrow$

7	10	+5
	70	+35

105

Ex 2 $20(b+c)$

20	b	+c
	20b	+20c

$20b + 20c$

$20b + 20c$

* multiply everything on the outside of the brackets by everything on the inside of the brackets *

Ex 1 Write the expression as a sum of terms

a) $7(c+2)$

$7c+14$

	c	$+2$
7	$7c$	$+14$

$\boxed{7c+14}$

b) $42(a+b)$

$42a+42b$

	a	$+b$
42	$42a$	$+42b$

$\boxed{42a+42b}$

Ex 2: Expand

a) $-3(x+5)$

$-3x-15$

	x	$+5$
-3	$-3x$	-15

$\boxed{-3x-15}$

b) $-4(-5+a)$

$20-4a$

	-5	$+a$
-4	20	$-4a$

$\boxed{20-4a}$

Ex 3: Expand

a) $6(x-3)$

$6x-18$

	x	-3
6	$6x$	-18

$\boxed{6x-18}$

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b) $5(8-c)$

$40-5c$

	8	$-c$
5	40	$-5c$

$\boxed{40-5c}$

HW:

A	B	C
7,8	11,12,13	14,15,16