Opener

Solve for the x & Justify your Steps:

① $8x^2-(3x^2+2)=1$

②Solve for x:

$x^2=85$

$x=\pm\sqrt{85}$

85

$5 \quad 17$

Solve for the x & Justify your steps.

① $8x^2-(3x^2+2)=1$ Given

$8x^2-3x^2-2=1$ DPOMOA

$5x^2-2=1$ CLT

$+2=+2$ Reflexive w/APE

$\frac{5x^2}{5}=\frac{3}{5}$ Reflexiv w/DPE

$\sqrt{x^2}=\sqrt{\frac{3}{5}}$ Square Root

$x=\pm\sqrt{\frac{3}{5}}$

Questions on homework 2B

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2B It's Hip 2B Square

Name: _____ Per: _____

SHOW YOUR WORK. IN PENCIL ONLY.

1. Use the value of 3 and -3 to illustrate the similarities and differences between the three expressions:
   $-a^2$ $(-a)^2$ a^2

Evaluate the following expressions (plug in the numbers) if $a = 4,\ b = -2, and\ c = 8$.

2. $3(a^2 + b) - ac$
3. $\frac{a}{b} + c^2(a - b)$
4. $\frac{a}{b} + c^2(a + b)$
5. $a^2 + b^2 + (-c)^2$
6. $a^2 + (b + c)^2$
7. $a^2 + b^2 + -c^2$

Write the following square roots with the lowest possible integer radicand. MUST SHOW WORK.

8. $\sqrt{81}$
9. $\sqrt{50}$
10. $\sqrt{100}$
11. $\sqrt{75}$
12. $\sqrt{-25}$
13. $\sqrt{25}$
14. $\sqrt{8}$
15. $\sqrt{49}$
16. $\sqrt{64}$
17. $\sqrt{40}$
18. $\sqrt{99}$
19. $\sqrt{63}$

Solve each equation for y and check your answer. Give exact answers with the lowest integer radicand.

20. $5y^2 = 2(12 + y^2)$
21. $2(y^2 + 1) = 10$
22. $3y^2 - y - 12 = -y + 24$

Solve each equation for x and check your answers.

23. $5(x^2 + 4) = 5 + 6x^2$ ✓
24. $2(x^2 + 2) = 8 - 2x^2$ ✓

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Solve the equation for the given variable and justify your steps using as many lines as needed.

EX: Solve for t and describe your steps:

$d = rt + s$	Given
$-s = -s$	Reflexive Property
$d - s = rt$	Additive Property of Equality
$\div r = \div r$	Reflexive Property
$\frac{d-s}{r} = t$	Multiplicative Property of Equality

25. Solve for m and describe your steps:

$z = 3(r + m^2)$

Given

$z = 3r + 3m^2$ DPOMOA

$-3r \quad -3r$ Reflexive w/APE

$\frac{z - 3r}{3} = \frac{3m^2}{3}$ Reflexive w/DPE

$\sqrt{\frac{z-r}{3}} = \sqrt{m^2}$ Sqr Rt.

$\pm\sqrt{\frac{z-r}{3}} = m$

26. Solve for f and describe your steps:

$s = 3f^2 - 24$

27. Solve for t and describe your steps:

$h - r = 16t + r$

28. Solve for w and describe your steps:

$A = 2l + 2w$

29. Solve for t and describe your steps:

$h = 8t^2 - q$

30. Classify the following expressions as: monomial, binomial or trinomial.

a. $a^2 + 6$ b. $3xy$ c. $3x^2 - 3y^2 - 2$ d. $5x + 1 - 2x$

31. The Westlake Golf Team rents time at the local golf course for $250 for the day. The course charges an additional $15 for each player that shows up to practice.

a. Define your variables.

b. Write an equation to show how much the team will pay to practice at the local golf course.

c. If 12 players come to practice, how much will they need to pay? _____

d. What if the team paid $520, how many players came to practice? _____

Grade Homework 2B

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Lesson 2B Translating English to Math *

SG pg 13: Writing Equations from a Description using Variables

Absolute Value Eqns.

Writing Equations from a Description using Variables.

Look for key words to decode the description.

Word	Usual Meaning	Example
3 Added to a number or 3 and a number	Something + Something else	x + 3
3 Times a Number	Multiplied by 3	3x
3 Less than a Number	Subtracting 3	x – 3
Into 3 equal groups	Divide by 3	x/3
Is 3 or totals 3	Equal to	= 3

Translate each part of the expression using the key word phrases and then rewrite the phrase using algebra. For example: Ten plus eight times a number equals eleven times that number minus six.

Ten plus (**10 +**) eight times a number (**8a**) is 6 less than eleven times that number (**11a**).

Rewrite as **10 + 8a = 11a – 6**

Same Number

Solve for the variable.

- **Translate the expression.** ~~Two times~~ the quantity of a number and three ~~is five less than~~ the number.

$2 \cdot (x+3) = x-5$

$2(x+3) = x-5$

Ten plus eight times a num. eq. eleven times that num. minus six.

$8x+10 = 11x-6$

$10+8x =$

+	-	x	/	=
add	less than	Product	Group	is

http://www.math-play.com/Algebraic-Expressions-Millionaire/algebraic-expressions-millionaire-game_html5.html

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Absolute Values

SG pg 16: Solving Equations with Absolute Value

Solving Equations with Absolute Value

Remember that the absolute value is the "distance" from zero.

Step 1: Isolate the absolute value expression.
Step 2: Set the quantity inside the absolute value notation equal to + and – the quantity on the other side of the equation.
Step 3: Solve for the unknown in both equations.

Solve the following equation:

- $\frac{1}{2}|2x-6| = 12$

$$|5x-6|+8 = 32$$
$$-8 = -8$$
$$|5x-6| = 24$$

$$(5x-6) = 24 \text{ or } -(5x-6) = 24$$
$$5x-6 = 24 \qquad 5x-6 = -24$$
$$5x = 30 \qquad 5x = -18$$
$$x = 6 \text{ or } x = -\frac{18}{5}$$

$(2x-6)=24$ $-(2x-6)=24$
$-2x+6=24$
$-2x=18$
$x=-9$

$|x+8|=1$

$+(x+8)=1$ $-(x+8)=1$

$x=-7$ OR $x=-9$

$(x+8)=1$
$x=-7$
$|-7+8|=1$
$|1|=1$

$(x+8)=-1$
$x=-9$
$|-9+8|=1$
$|-1|=1$

$\frac{2|x-8|}{2} = \frac{1}{2}$

$|x-8| = \frac{1}{2}$

$x-8=\frac{1}{2}$ $x-8=-\frac{1}{2}$

$x=\frac{1}{2}+8$ $x=-\frac{1}{2}+8$

$x=\frac{17}{2}$ $x=\frac{15}{2}$

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Attachments

2B It's Hip 2B Square KEY.notebook