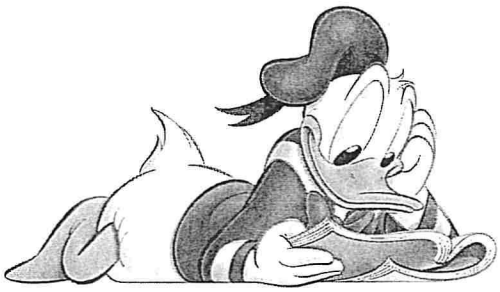
~ Module 6 – Lesson 1 ~

Collecting Like Terms & the Distributive Property

TLW use the properties of addition along with the distributive property to add and subtract algebraic expressions

TLW use the distributive property to remove parenthesis from an algebraic expression

TLW simplify or expand algebraic expressions



Collecting Like Terms

- Collecting 'like' terms means _____
- To collect 'like' terms you simply add or subtract the number in front of the terms which is called the _____.
- If there is not a number in front of the variable such as x we know that number to be a _____

Let's look at some examples of things that are and are not 'like' terms:

Decide if the terms in each pair of items are "Like Terms".

1) **4g and 4h** NO – letter variables are different.

2) **3h and ⁻h** YES – letters the same (⁻h = ⁻1h)

3) **5x and 4xy** NO – letter variables are different.

4) **$2x^2y^3$ and $2x^2y^5$** NO – y powers are different.

5) **$5p^2q^3$ and $-4p^2q^3$** YES – letters & powers same

Now you try!

Decide if the terms in each pair of items are "Like Terms".

(a) $5x$ and $3x^2$ (b) $7xy$ and $6yx$ (c) $-9a^2b$ and $5ab^2$

Distributive Property

To use The Distributive Property is to multiply a sum or difference multiply each number in the sum or difference by the number outside of the parenthesis then evaluate if possible.
For example:

2(x+4)	Original problem
2(x+4)	We will distribute the 2 throughout the parentheses.
2(x) +2(4)	Multiply the 2 times the x. Then multiply 2 times 4.
2x + 8	Simplify

Now Let's Try!

In each expression, use the distributive property to simplify.

(a) $5(x+7)$ (b) $3(x-6)$ (c) $8(y-7)$

(d) $-9(x+2)$ (e) $-4(y-3)$ (f) $-2(y-11)$

Now let's combine the two new fun things we just learned...

Distributive – Collect Like Terms

$$3(a+4)+4(a+2)$$
$$3a+12+4a+8$$
$$=7a+20$$

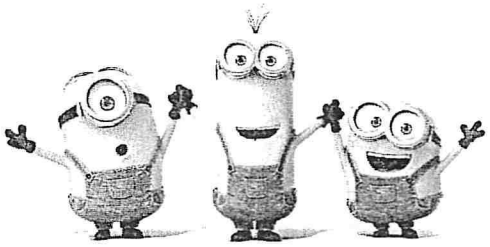
Let's Try!

(a) $2(x+y)+3x-5y$ (b) $3(x-7)+4(2x-3)$

~ Variables & Expressions ~

TLW translate between words and algebra

TLW evaluate algebraic expressions



Some Important Vocabulary...

A _____ is a letter or symbol used to represent a value that can change.

A _____ is a value that does not change.

A _____ may contain only constants and/or operations.

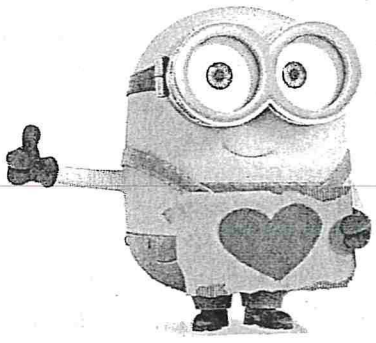
An _____ may contain variables, constants, and/or operations.

+	−
Plus, sum, increased by	Minus, difference, less than
×	÷
Times, product, equal groups of	Divided by, quotient

Writing Math

These expressions all mean "2 times y":

$2y$	$2(y)$
$2 \cdot y$	$(2)(y)$
$2 \times y$	$(2)y$



Give two ways to write each algebraic expression in words.

(a) $x+3$

(b) $m-7$

(c) $2 \cdot y$

(d) $k \div 5$

Now you try! Write each algebraic expression in words.

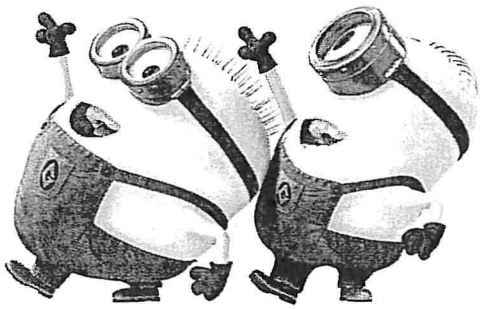
1. $4-n$

2. $\frac{t}{5}$

3. $9+w$

4. $3(h)$

Add	Subtract
Put together, combine	Find how much more or less
Multiply	**Divide**
Put together equal groups	Separate into equal groups



Translate from words to algebraic symbols.

(a) Eve reads 25 pages per hour. Write an expression for the number of pages she reads in h hours.

(b) Sam is 2 years younger than Sue, who is y years old. Write an expression for Sam's age.

(C) William runs a mile in 12 minutes. Write an expression for the number of miles that William runs in m minutes.

Guided Practice

1. John types 62 words per minute. Write an expression for the number of words he types in m minutes.

2. Roberto is 4 years older than Emily, who is y years old. Write an expression for Roberto's age.

3. Joey earns $5 for each car he washes. Write an expression for the number of cars Joey must wash to earn d dollars.

4. Lou drives at 65 mi/h. Write an expression for the number of miles that Lou drives in t hours.

5. Miriam is 5 cm taller than her sister, than her sister who is m centimeters tall. Write an expression for Miriam's height in centimeters.

6. Elaine earns $32 per day. Write an expression for the amount she earns in d days.

Simplify each expression by using the distributive property and/or collecting like terms.

7. $2a-4b+6a-8b$

8. $7-4m-8$

9. $1+12b+12b+2$

10. $-12+8r+1-r$

11. $11(1-11x)$

12. $12(a+10)$

13. $5(1+12n)-4(11+8n)$

14. $-7(4-8x)-28$

15. $11-4(8-2y)$

16. $-10-4(n-6)$

17. $9(10x+11)+8(5x+6)$

18. $-3(a+b-2)-3b+6a$

Combining Like Terms

Date_____ Period____

Simplify each expression.

1) $-6k + 7k$

2) $12r - 8 - 12$

3) $n - 10 + 9n - 3$

4) $-4x - 10x$

5) $-r - 10r$

6) $-2x + 11 + 6x$

7) $11r - 12r$

8) $-v + 12v$

9) $-8x - 11x$

10) $4p + 2p$

11) $5n + 11n$

12) $n + 4 - 9 - 5n$

13) $12r + 5 + 3r - 5$

14) $-5 + 9n + 6$

15) $n - 4 - 9$

16) $4n - n$

17) $-3x - 9 + 15x$

18) $-9k + 8k$

19) $-16n - 14n$

20) $15n - 19n$

21) $-4 + 7(1 - 3m)$

22) $-5n + 3(6 + 7n)$

23) $-2n - (9 - 10n)$

24) $10 - 5(9n - 9)$

25) $9a + 10(6a - 1)$

26) $-9(6m - 3) + 6(1 + 4m)$

27) $-10(1 - 9x) + 6(x - 10)$

28) $5(-2n + 4) + 2(n + 3)$

29) $-3(10b + 10) + 5(b + 2)$

30) $-7(n + 3) - 8(1 + 8n)$

Simplify Expressions: Combining Like Terms and the Distributive Property: Day 2

Simplify each expression.

1) $-10b + b$

2) $-x - 3x$

3) $1 + 5v + v$

4) $-7n - 7 - 8 + 10n$

5) $5k + 7k$

6) $a - 2 + 1 + 4a$

7) $8(x + 10)$

8) $8(1 + 6p)$

9) $-5(-7 + 7n)$

10) $-(9m + 7)$

11) $-(1 - 5x)$

12) $-4(7r + 7)$

13) $-2(n-9)+4$

14) $-6+9(8-2b)$

15) $6x-3(2-3x)$

16) $-8(-2r-2)-6r$

17) $-3(a+1)+6$

18) $-2(-3-3n)+1$

19) $3(1+2v)-3(1+4v)$

20) $4(x-10)-6(x-4)$

21) $4(10x+6)-10(9x+9)$

22) $10(9+8n)-6(7n+9)$

23) $7(1+10p)+8(1+6p)$

24) $10(3+8k)+9(k+3)$

date_____ section_____ Name_____

CLASSWORK - Combining Like Terms & Distributive Property

Combine like terms to simplify each expression.

1) $-4x + 5x$

2) $1 + 5v + v - 6$

3) $4n + 4 + 1 + 3n$

4) $11a + 11a$

5) $-2x - 8 - 7x + 2$

6) $7v + 6v$

7) $-8x - 10x$

8) $6 - 7n - 2n - 8$

9) $2k - k$

10) $-p - 11 + 3$

11) $9n + 3n$

12) $12x + 11 - 4$

Use Distributive Property.

13) $3(-7 - 8n)$

14) $-8(1 + 5m)$

15) $8(r + 1)$

16) $8(7x + 8)$

17) $2(6n - 8)$

18) $-3(8 - b)$

19) $-5(8v - 2)$

20) $-2(x - 5)$

21) $-(3a - 3)$

22) $-2(7 - 2n)$

23) $-8(5 - 3v)$

24) $-7(6x - 3)$

First, use Distributive Property, then Combine Llike Terms to simplify each expression.

25) $-n + 4(n + 1)$

26) $-3(1 - 3x) + 2x$

27) $-2(-3k + 4) - 7$

28) $-3p - (-8 + 4p)$

29) $-4 + 6(-4x + 3)$

30) $3n + 3(1 + 8n)$

31) $-2 + 5(4 + 3r)$

32) $-1 + 3(m + 4)$

33) $-(-n + 2) - 2n$

34) $-3(5 + 2x) - 7$

~ Module 6 ~ Lesson 1 ~ Word Problems

TLW use the properties of addition along with the Distributive Property to add and subtract algebraic expressions

TLW collect like terms to simplify algebraic expressions in word problems

TLW spread Christmas cheer by singing loud for all to hear

Jill and Kyle get paid per project. Jill is paid a project fee of $25 plus $10 per hour. Kyle is paid a project fee of $18 plus $14 per hour. Write an expression to represent how much a company will pay to hire both to work the same number of hours on a project.

Step 1: Write expressions for how much the company will pay each person.
Let h represent the number of hours they will work on the project.

Jill: Kyle:

Step 2: Add the expressions to represent the amount the company will pay to hire both.

Your Turn!

The manager of a summer camp has 14 baseballs and 23 tennis balls. The manager buys some boxes of baseballs with 12 baseballs to a box and an equal number of boxes of tennis balls with 16 tennis balls to a box. Write an expression to represent the total number of balls.

Step 1: Write expressions for the total number of baseballs and tennis balls.
Let n represent the number of boxes of each type.

Baseballs: Tennis Balls:

Step 2: Find an expression for the total number of balls.

- Use the expression you found above to find the total number of baseballs and tennis balls if the manager bought 9 boxes of each type.

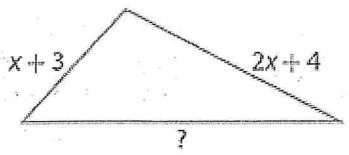
Guided Practice

1. A company rents out 15 food booths and 20 game booths at the county fair. The fee for a food booth is \$100 plus \$5 per day. The fee for a game booth is \$50 plus \$7 per day. The fair lasts for d days, and all the booths are rented for the entire time. Write and simplify an expression for the amount in dollars that the company is paid.

2. A rug maker is using a pattern that is a rectangle with a length of 96 inches and a width of 60 inches. The rug maker wants to increase each dimension by a different amount. Let l and w be the increases in inches of the length and width. Write and simplify an expression for the perimeter of the new pattern.

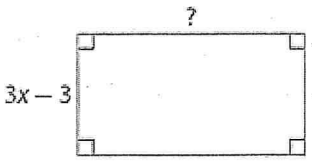
3. Find the length of the indicated side given the following information.

(a)



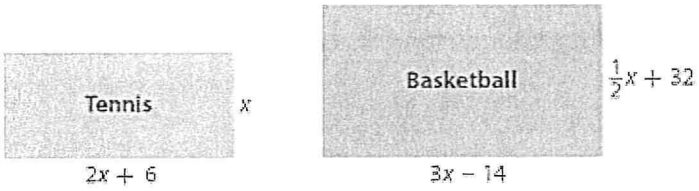
Perimeter $= 6x$

(b)



Perimeter $= 10x + 6$

4. The figures show the dimension of a tennis court and a basketball court given in terms of the width x in feet of the tennis court.



(a) Write an expression for the perimeter of each court.

(b) Write an expression that describes how much greater the perimeter of the basketball court is than the perimeter of the tennis court.

(c) Suppose the tennis court is 36 ft wide. Find all dimensions of the two courts.

Write an algebraic expression for each verbal description.

5. Half of the seventh graders and one third of the eighth graders were divided into ten teams.

6. Thirty percent of the green house flowers are added to 25 ferns for the school garden.

7. Four less than three times the number of egg orders and six more than two times the number of waffle orders.

Name: Date: Period:

Module 6 – Lesson 1 Practice WS (1) Zebras

Simplify each expression.

1. $2a-5b-8a+6b$ 1. _____

2. $3x+1-7x-9$ 2. _____

3. $-7(x-2y+4)$ 3. _____

4. $3(x-8)-12$ 4. _____

5. $9(c-8)$ 5. _____

6. $4(x-1)-6(5x+3)$ 6. _____

Read each problem carefully.

7. A construction worker bought several bottles of juice for $3 at the convenience store. She paid for them with a $20 bill. If j represents the number of bottles of juice, write an expression for the change she should receive.

8. A giant bamboo plant grew an average of $18\ cm$ per year. The botanist started measuring the plant when it was $5\ cm$ tall. If y represents the number of years the botanist has measured the plant, what expression represents its height?

9. The science club went on a two-day field trip. The first day the members paid $\$60$ for transportation plus $\$15$ per ticket to the planetarium. The second day they paid $\$95$ for transportation plus $\$12$ per ticket to the geology museum. Write an expression to represent the total cost for two days for the n members of the club.

10. A square plot of land is k miles on each side. How many miles around is this plot of land?

11. A small backyard measures $45\ ft$ on one side. The other side measures $(h+20)\ ft$. How many feet around is the yard?

12. A table is measured to be $(a+b)\ in$ long and $(5b+12)\ in$ wide. What is the measure of the perimeter of the table?

13. Mary has $(g+24.50)$ in her bank account. Bobby has $(7g-52.34)$ in his bank account. How much do they have in all?

Name _____ Date _____ Class _____

LESSON 6-1

Algebraic Expressions

Practice and Problem Solving: A/B

Write an algebraic expression for each phrase.

1. Four more than the price, p

_____

2. Five less than three times the length, L

_____

Write a word phrase for each algebraic expression.

3. $25 - 0.6x$

_____

4. $\frac{2}{3}y + 4$

_____

Use the Distributive Property to simplify each expression.

5. $(100 + 4z)20$

_____

6. $0.75(3.5a - 6b)$

_____

Factor each expression.

7. $45c + 10d$

_____

8. $27 - 9x + 15y$

_____

Solve. Show each step.

9. A construction worker bought several bottles of juice for $3 at the convenience store. She paid for them with a $20 bill. If j represents the number of bottles of juice, write an expression for the change she should receive.

_____

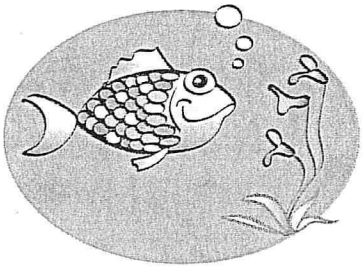
10. A giant bamboo plant grew an average of 18 centimeters per year. The botanist started measuring the plant when it was 5 centimeters tall. If y represents the number of years the botanist has measured the plant, what expression represents its height?

_____

~ Module 6 – Lesson 2 ~
Solving One-Step Equations

TLW solve one-step equations by using addition or subtraction

TLW solve one-step equations by using multiplication or division



An _____ is a mathematical statement that two expressions are equal.

A _____ is a value of the variable that makes the equation true.

To find solutions of the equations, _____. A variable is isolated when it appears all by itself on one side of an equation. Isolate a variable by using inverse operations, which 'undo' operations on the variable.

The inverse operation of addition is _____.

The inverse operation of subtraction is _____.

The inverse operation of multiplication is _____.

The inverse operation of division is _____.

Try these!

1. $x-5=3$

2. $x-(-4)=10$

3. $-12=m-3$

4. $p-2=-9$

5. $-\frac{5}{2}+c=-\frac{5}{2}$

6. $x-22=42$

7. $\frac{k}{2}=-9$

8. $\frac{x}{-4}=-4$

9. $-6=\frac{t}{8}$

10. $14x=-28$

11. $-y=-17$

12. $-6m=28$

Guided Practice

1. $x-(-3)=17$

2. $41=w-4$

3. $k-8=-19$

4. $t-5=12$

5. $-2+d=97$

6. $-7+x=-18$

7. $18=2+v$

8. $x-(-9)=-10$

9. $-26=m-36$

10. $\frac{5}{8}=t-\frac{3}{8}$

11. $-\frac{3}{7}+c=-\frac{3}{7}$

12. $x-\frac{4}{7}=\frac{3}{7}$

13. $\frac{k}{9}=-8$

14. $\frac{x}{-12}=-4$

15. $-16=\frac{t}{-2}$

16. $24x=-12$

17. $-y=-145$

18. $-7m=-49$

19. $\frac{d}{-15}=-3$

20. $6=-3x$

21. $-3+y=-6$

Name: _____ Date: _____ Core: _____

6.2 Practice WS

Blueberry

Solve each equation.

1. $x-(-5)=7$

2. $11=w-4$

3. $k+8=-9$

4. $t-5=32$

5. $-12-d=7$

6. $-4+x=-15$

7. $18=-2+v$

8. $x-(-4)=-10$

9. $-12=m-36$

10. $\frac{7}{8}=t-\frac{1}{8}$

11. $-\frac{5}{6}+c=-\frac{5}{6}$

12. $x-\frac{1}{9}=\frac{2}{9}$

13. $\frac{k}{3}=-8$

14. $\frac{x}{-2}=-4$

15. $-6=\frac{t}{-7}$

16. $28x=-28$

17. $-y=-15$

18. $-6m=15$

19. $\frac{d}{12}=-3$

20. $9=-3x$

21. $2y=-6$

22. $5=\frac{w}{-7}$

23. $-16=8w$

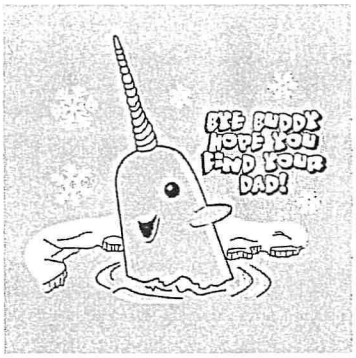
24. $\frac{t}{24}=-10$

Module 6 Lesson 2
Word Problem Notes

TLW use one-step equations with rational coefficients to solve word problems

TLW write one-step and two-step equations

TLW hope buddy finds his dad



Quick Review

Solve each equation for the indicated variable.

1. $x+3.2=8.5$

2. $-3c=-36$

3. $x+5=11$

4. $-4y=-2$

5. $a-3=-5$

6. $\frac{x}{4}=-9$

Negative numbers often appear in real-world situations. For example, elevations below sea level are represented by negative numbers. When you increase your elevation, you are moving in a positive direction. When you decrease your elevation you are moving in a negative direction.

Give a couple of real world examples where you see both positive and negative numbers.

Examples of Positive Numbers in the Real World

Examples of Negative Numbers in the Real World

Example 1

A scuba diver is exploring at an elevation of -12.2 meters. As the diver rises to the surface, she plans to stop and rest briefly at the reef that has an elevation of -4.55 meters. Find the vertical distance that the diver will travel.

Step 1: Write an equation. Let x represent the vertical distance between her initial elevation and the elevation of the reef.

Step 2: Solve the equation using an inverse operation.

Step 3: Write a complete sentence that answers the question.

Example 2

An airplane descends 1.5 miles to an elevation of 5.25 miles. Find the elevation of the plane before its descent.

Step 1: Write an equation.

Step 2: Solve the equation using an inverse operation.

Step 3: Write a complete sentence that answers the question.

Example 3

The value of a share of stock decreases in value at a rate of $\$1.20$ per hour during the first 3.5 hours of trading. Write and solve an equation to find the decrease in the value of the share of stock during that time.

Step 1: Write an equation.

Name: _____ Date: _____ Period: _____

~~Module 6 Lesson 2 Practice WS~~ Lions

In 1 – 6, solve each equation for the indicated variable.

1. $x-9=17$

2. $\frac{b}{4}=-8$

3. $6h=180$

4. $x+21.7=14.9$

5. $9d=-0.5$

6. $\frac{x}{-7}=8$

In 7 – 10, read each problem carefully and be sure to answer the question.

7. A hot air balloon begins its descent at a rate of 22.5 feet per minute. How long will it take for the balloon's elevation to change by −315 feet? Write and solve an equation.

8. A football team has a net yardage of −26.7 yards on a series of plays. The team needs a net yardage of 10 yards to get a first down. How many yards does the team have to get on the next play to get a first down? Write and solve an equation.

9. April withdrew money from her savings account in each of 5 months. The average amount she withdrew per month was $45.50. How much did she withdraw in all during the 5 months? Write and solve an equation.

10. The height of the water in an above ground pool is 3 feet. The pool needs to be drained. As the water drains, the height of the water changes at a rate of $-\frac{1}{2}$ inch per minute. Write and solve an equation to find how many minutes it will take to drain the pool.

Name _____ Date _____ Class _____

LESSON 6-2

One-Step Equations with Rational Coefficients

Practice and Problem Solving: A/B

Solve.

1. $\frac{1}{3}n = 4$

_____

$n =$ _____

2. $y + 0.4 = 2$

_____

$y =$ _____

3. $12 = 0.5a$

_____

$a =$ _____

4. $-1 = \frac{1}{3}v$

_____

$v =$ _____

5. $15.5z = -77.5$

_____

$z =$ _____

6. $\frac{t}{-11} = 11$

_____

$t =$ _____

7. $0.5m = 0.75$

_____

$m =$ _____

8. $\frac{r}{4} = 250$

_____

$r =$ _____

Write each sentence as an equation.

9. Eight less than $\frac{1}{3}$ a number n is -13.

_____

10. A number f multiplied by -12.3 is -73.8.

_____

Write an equation. Then, solve.

11. During unusually cold weather, the temperature in Miami Beach was 10°C. This was 12 degrees more than in Tallahassee. What is the temperature in Tallahassee?

_____

12. A swimmer swam 48 kilometers in d days. What is the value of d if the swimmer swam an average of 3.2 kilometers daily?

_____

13. Fifteen tickets cost $193.75. What is the average cost of each ticket?

_____

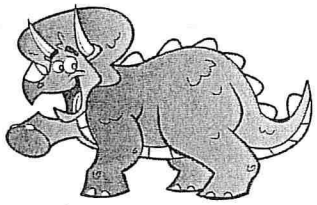
14. A student walks $\frac{1}{4}$ mile from her home to the store on her way to a friend's house. If the store is $\frac{1}{3}$ of the way to her friend's house, how far is her friend's house from her home?

_____

Module 6 Lesson 3
Solving Two-Step Equations

TLW solve equations in one variable that contain more than one operation

TLW solve equations in one variable that contain one operation



Use the following example as a guide to help you begin the equation solving process:

example: $7x-14=7$

1) ADD OR SUBTRACT AWAY FROM THE VARIABLE SIDE — $7x=21$
2) MULTIPLY OR DIVIDE AWAY FROM THE VARIABLE SIDE — $x=3$

Try these!

1. $2x-14=10$
2. $\frac{m}{6}+4=12$
3. $5c+10=-20$
4. $-9r+7=-23$
5. $8+3g=-14$
6. $11t-3=-25$
7. $4a+5=1$
8. $-3-5m=-28$
9. $7d+12=33$

Guided Practice

Solve each equation for the indicated variable.
Remember – a good first step is to add or subtract away from the variable side.

1. $4a+3=11$
2. $8=3r-1$
3. $42=-2d+6$
4. $x+0.3=3.3$
5. $15y+31=61$
6. $9-c=-13$
7. $\frac{x}{6}+4=15$
8. $4-\frac{m}{2}=10$
9. $7y-7=0$
10. $3t+7=19$
11. $28=x-12$
12. $6h-7=17$
13. $3x+3=18$
14. $3t+44=50$
15. $15=\frac{c}{3}-2$
16. $6+6x=30$
17. $9-6x=45$
18. $32=5-3t$

Name: _____ Date: _____ Period: _____

6.3 Practice WS (1) Math is Fantastic!!!

Solve each equation for the given variable. Please circle, rectangle, or triangle your answer.

1. $13x+7=-32$

2. $2x+8=6$

3. $-8r+16=40$

4. $2w-12=8$

5. $2f+6=22$

6. $3x-4=-16$

7. $2+\frac{1}{5}x=-7$

8. $-6=\frac{u}{2}+12$

9. $-3+2n=-15$

10. $\frac{1}{2}g-5=12$

11. $4k+7=-1$

12. $3c-6=15$

13. $7h+1=-13$

14. $5e-4=26$

15. $\frac{m}{3}-7=-10$

Name: _____ Date: _____ Period: _____

6.3 & 6.4 Practice WS (2) Math is Pretty

Solve for the given variable in each equation. Rectangle your answers.

1. $-2a+3=11$

2. $7=3r-11$

3. $-12=-2d+6$

4. $2x+0.3=4.3$

5. $15y+91=61$

6. $7-c=-13$

7. $\frac{x}{4}+5=15$

8. $3-\frac{m}{5}=10$

9. $-12+6y=0$

10. $4t+7=19$

11. $28=16x+12$

12. $-10h-7=17$

13. $-6x-3=27$

14. $-7t+50=99$

15. $1=\frac{c}{8}-2$

16. $15x - 1 = 149$

17. $11 - 6x = 47$

18. $32 = 8 - 5t$

19. $\frac{x}{5} - 6 = 0$

20. $\frac{2}{-3}y = 6$

21. $-5x - 18 = 7$

22. $-10x - 1 = -91$

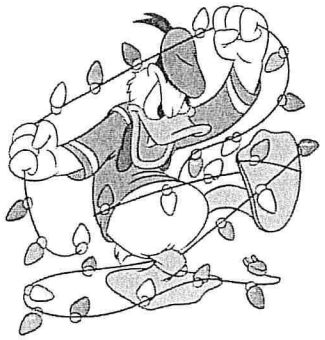
23. $-11 - 6x = 31$

24. $-32 = -10 - 11t$

Module 6 Lesson 4 Word Problem Notes

TLW write two-step equations to represent real-world problems by translating the words of the problems into numbers, variables and operations

TLW solve two-step equations using inverse operations of addition, subtraction, multiplication and division



Writing Two Step Equations

Example 1

A one-year membership to Metro Gym costs $460. There is a fee of $40 when you join, and the rest is paid monthly. Write an equation to represent what you will pay monthly for the yearlong membership. Write an equation that would help members find how much they pay per month.

Step 1: Identify what you are trying to find. This will be the variable in the equation.

Let m represent the amount of money members pay per month.

Step 2: Identify important information in the problem that can be used to help write an equation.

One-time joining fee:	$40
Fee charged for 1 year:	$12 \cdot m$
Total cost for the year:	$460

Convert 1 year into 12 months to find how much members pay per month.

Step 3: Use words in the problem to tie the information together and write an equation.

One-time joining fee	plus	12	times	monthly cost	equals	$460
↓	↓	↓	↓	↓	↓	↓
$40	+	12	·	m	=	$460

The equation $40+12m=460$ can help members find out their monthly fee.

Example 2

Billy has a gift card with a $150 balance. He buys several video games that cost $35 each. After the purchases, his gift card balance is $45. Write an equation to help find out how many video games Billy bought.

Step 1:

Step 2:

Step 3:

Example 3

Val rented a bicycle while she was on vacation. She paid a flat rental fee of $55.00, plus $8.50 each day. The total cost was $123. Write an equation you can use to find the number of days she rented the bicycle.

Step 1:

Step 2:

Step 3:

Guided Practice

(a) A restaurant sells a coffee refill mug for $6.75. Each refill costs $1.25. Last month Keith spent $31.75 on a mug and refills. Write an equation you can use to find the number of refills that Keith bought.

(b) A gym holds one 60-minute exercise class on Saturdays and several 45-minute classes during the week. Last week all of the classes lasted a total of 285 minutes. Write an equation you can use to find the number of weekday classes.

(c) A school bought $548 in basketball equipment and uniforms costing $29.50 each. The total cost was $2,023. Write an equation you can use to find the number of uniforms the school purchased.

(d) Heather has $500 in her savings account. She withdraws $20 per week for gas. Write an equation Heather can sue to see how many weeks it will take her to have a balance of $220 .

Name: _____ Date: _____ Period: _____

Module 6 Word Problem Practice WS Chicken Nuggets

Solve each problem by writing and solving an equation.

1. After making a deposit, Parker had $\$264$ in his savings account. He noticed that if he added $\$26$ to the amount originally in the account and doubled the sum, he would get the new amount. How much did he originally have in the account?

2. The current temperature in Smalltown is $20°F$. This is $6°$ less than twice the temperature that is was six hours ago. What was the temperature in Smalltown six hours ago?

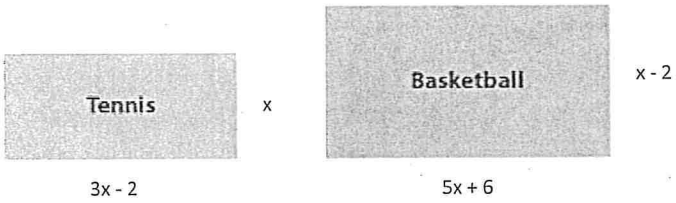
3. Carter has 11 more than twice as many customers when he started selling newspapers. He now has 73 customers. How many did he have when he started?

4. The McIntosh family went apple picking. They picked a total of 115 apples. The family ate a total of 8 apples each day. After how many days did they have 19 apples left?

5. A rectangular picture frame has a perimeter of 58 inches. The height of the frame is 18 inches. What is the width of the frame?

6. A school store has 1200 pencils in stock, and sells an average of 24 pencils per day. The manager reorders when the number of pencils in stock is 500.
In how many days will the manager have to reorder?

7. The figures show the dimension of a tennis court and a basketball court given in terms of the width x in feet of the tennis court.



(a) Write an expression for the perimeter of each court.

(b) Suppose the tennis court is 15 ft wide. Find the perimeter for both of the courts.

Name _____ Date _____ Class _____

LESSON 6-3

Writing Two-Step Equations

Practice and Problem Solving: A/B

Model each two-step operation by drawing algebra tiles.

1. $3m + 5 = 8$

_____

2. $-2x - 3 = 5$.

_____

Write an equation to represent each problem.

3. The sum of fifteen and six times a number t is eighty-one. What is the number?

_____

4. An electrician charges $40 to come to your house. She also charges $55 for each hour that she works. The electrician charges you a total of $190. How many hours does the electrician work at your house? Use h for the number of hours.

_____

5. A taxi charges $1.75 plus a fee of $0.75 for each mile traveled. The total cost of a ride, without a tip, is $4.75. How many miles is the trip? Use m for the number of miles traveled.

_____

Name _____ Date _____ Class _____

LESSON 6-4

Solving Two-Step Equations

Practice and Problem Solving: A/B

Solve each equation. Cross out each number in the box that matches a solution.

–18	–8	–6	–4	–3	–2	2	3	4	6	8	18

1. $5x + 8 = 23$

2. $-2p - 4 = 2$

3. $6a - 11 = 13$

4. $4n + 12 = 4$

5. $9g + 2 = 20$

6. $\frac{k}{6} + 8 = 5$

7. $\frac{s}{3} - 4 = 2$

8. $\frac{c}{2} + 5 = 1$

9. $9 + \frac{a}{6} = 8$

Solve. Check each answer.

10. $3v - 12 = 15$

11. $8 + 5x = -2$

12. $\frac{d}{4} - 9 = -3$

Write an equation to represent the problem. Then solve the equation.

13. Two years of local Internet service costs $685, including the installation fee of $85. What is the monthly fee?

14. The sum of two consecutive numbers is 73. What are the numbers?