online

I hope you are staying safe and enjoying your family time together.

First of all....remember that on the **Thursday and Friday before we left , I gave you AMI days 6-15**. You should already have your purple worksheets, graph paper, and formula sheets for those. For all of this work you ONLY need a simple calculator. **No graphing calculator is needed**. I have attached AMI days 16-25 to this letter. Hopefully I have counted the days/calendar correctly. I think AMI day 10 begins on Monday, March 30. This packet, along with the one I gave you before we left, should get you through April 20. Governor Hutchison, as of right now, says schools will be re-opening then.

If you have any questions, please contact me. My email address is...
Mandy.Brown@norfork.k12.ar.us

Send a text to

81010

Text this message

@84e4fcb

I have also started a remind text group. Do the following steps to be added to the **ALGEBRA I** group. Give these instructions to your parents also. They can also be a part of our group!!! (It's going to be sooooo much fun!!) Once you are a part of our group, I will respond and ask you your name, so I will know who you are.

IF YOU WANT TO KNOW YOUR CURRENT GRADE AND CANNOT OPEN YOUR ESCHOOL, LET ME KNOW, AND I WILL TELL YOU WHAT IT IS. Some of you have asked how you can improve your grade. I have added all work to the computer that has been turned in to me. **NO MORE MAKE UP WORK WILL BE ACCEPTED UNDER ANY CIRCUMSTANCE**.

Here is how you can raise your grade.... **Complete your AMI packets.** You can take a picture and email it to me, Remind/text it to me, or drop it off at the school. As I receive them I will add them to the computer.

Please pass the word to your friends about this letter. I don't want to skip anyone. If the worksheets cannot be printed, write the answers on a piece of paper. If you have ANY QUESTIONS, CONTACT ME. I don't mind at all...remember my quote I always say, "I get paid to answer questions."

ONE LAST THING! I AM MISSING CALCULATORS #26 AND #29.

I NEED THEM AS SOON AS POSSIBLE!

AMI Algebra I: Day 16

1. Evaluate the expression $\dfrac{3a + 2b}{2}$ when $a = -3$ and $b = -4$.

2. Simplify: $3 + 5 \bullet 6 - 4$

3. Simplify: $6 - 2 \bullet 2 + 2^5$
   A) 40
   B) 18
   C) 34
   D) 12

4. Evaluate: $\dfrac{3x - y}{6z - x}$ if $x = 2$, $y = 8$, and $z = -2$.

5. Simplify: $\dfrac{14 - 30}{2(-4)}$

6. Use the distributive property to simplify. $-3(x - 10) + x$

   A) $-4x + 30$
   B) $-4x - 30$
   C) $-2x + 30$
   D) $-2x - 30$

7. Simplify: $8y - 2 - 3(y - 4)$
   A) $11y - 6$
   B) $5y - 6$
   C) $5y - 14$
   D) $5y + 10$

8. Write the fraction in lowest terms: $\dfrac{36a^3bc^2}{24ab^4c^2}$

   A) $\dfrac{3b^2}{2a^3}$

   B) $\dfrac{2b^3}{3a^2}$

   C) $\dfrac{3a^2}{2b^3}$

   D) $\dfrac{2a^2}{3b^3}$

9. Solve for x: $3(x-1) = -6$

10. Add the polynomials: $2a + 3b + 5a - 7b$

   A) $7a - 4b$
   B) $7a + 4b$
   C) $3ab$
   D) $7a - 10b$

11. Subtract the polynomials: $\left(9x^2 - 4x + 11\right) - \left(3x^2 - 2x - 2\right)$

   A) $6x^2 - 2x + 9$
   B) $6x^2 - 2x + 13$
   C) $6x^2 - 6x + 9$
   D) $6x^2 - 6x + 13$

12. $(x+2)\left(x^2 - 2x + 4\right) =$
   A) $x^3 - 8$
   B) $x^3 - 4x^2 - 8x + 8$
   C) $x^3 - 4x^2 + 8x + 8$
   D) $x^3 + 8x - 8$

13. The difference of twice a number and six is four times the number. Find an equation to solve for the number.
   A) $2x - 6 = 4$
   B) $2x - 6 = 4x$
   C) $2x + 6 = 4x$
   D) $2x - 6 = x - 4$

14. Expand: $(2x-3)^2$

    A) $4x^2-9$

    B) $4x^2-9$

    C) $2x^2-12x+9$

    D) $4x^2-12x+9$

15. Which of the following numbers is the smallest?

    A) $-\dfrac{3}{4}$

    B) $-\dfrac{3}{2}$

    C) -1

    D) $-\dfrac{2}{3}$

16. Which of the following is the largest?

    A) $|5-2|$

    B) $|2-5|$

    C) $|-2-5|$

    D) $|5-2|+|2-5|$

17. Solve: $3(x-5)\le x-8$

    A) $x\le\dfrac{7}{2}$

    B) $x\le\dfrac{2}{7}$

    C) $x\le-1$

    D) $x\ge-1$

18. A flower-bed is in the shape of a triangle with one side twice the length of the shortest side and the third side 15 feet longer than the shortest side. If the perimeter is 100 feet and if x represents the length of the shortest side, find an equation to solve for the lengths of the three sides.

    A) $x + 2x + x + 15 = 100$

    B) $x - 15 = 2x$

    C) $x + 15 + 2x = 100$

    D) $x - 2x = x + 115$

19. If John has $50 more money than Mary and you choose to represent John's amount of money as X how should you represent Mary's amount of money in terms of X?
   A) X + $50
   B) X - $50
   C) $50 – X
   D) $50·X

20. Multiply: $2x(3x^2 - 5x - 3)$
   A) $6x^3 - 5x^2 - 6x$
   B) $6x^3 - 5x - 3$
   C) $6x^3 - 10x^2 - 3x$
   D) $6x^3 - 10x^2 - 6x$

25. Solve: $x^2 - 3x - 10 = 0$
   One solution is:
   A) $x = 10$
   B) $x = 1$
   C) $x = -2$
   D) $x = 2$

29. What are the coordinates of the x-intercept in the graph below?
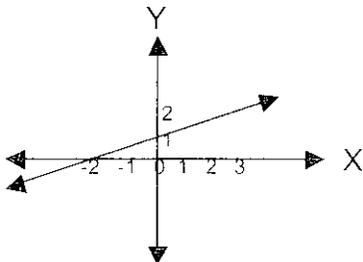
   A) $(-1,2)$
   B) $(0,-2)$
   C) $(-2,0)$
   D) $(0,1)$

AMI Algebra I: Day 18

1) 331 students went on a field trip. Six buses were filled and 7 students traveled in cars. How many students were in each bus?

2) Aliyah had $24 to spend on seven pencils. After buying them she had $10. How much did each pencil cost?

3) The sum of three consecutive numbers is 72. What are the smallest of these numbers?

4) The sum of three consecutive even numbers is 48. What are the smallest of these numbers?

5) You bought a magazine for $5 and four erasers. You spent a total of $25. How much did each eraser cost?

6) Maria bought seven boxes. A week later half of all her boxes were destroyed in a fire. There are now only 22 boxes left. With how many did she start?

7) Sumalee won 40 super bouncy balls playing horseshoes at her school's game night. Later, she gave two to each of her friends. She only has 8 remaining. How many friends does she have?

8) Imani spent half of her weekly allowance playing mini-golf. To earn more money her parents let her wash the car for $4. What is her weekly allowance if she ended with $12?

9) Aliyah had some candy to give to her four children. She first took ten pieces for herself and then evenly divided the rest among her children. Each child received two pieces. With how many pieces did she start?

10) How old am I if 400 reduced by 2 times my age is 244?

11) Jill sold half of her comic books and then bought sixteen more. She now has 36. With how many did she begin?

12) For a field trip 4 students rode in cars and the rest filled nine buses. How many students were in each bus if 472 students were on the trip?

AMI Algebra I: Day 19
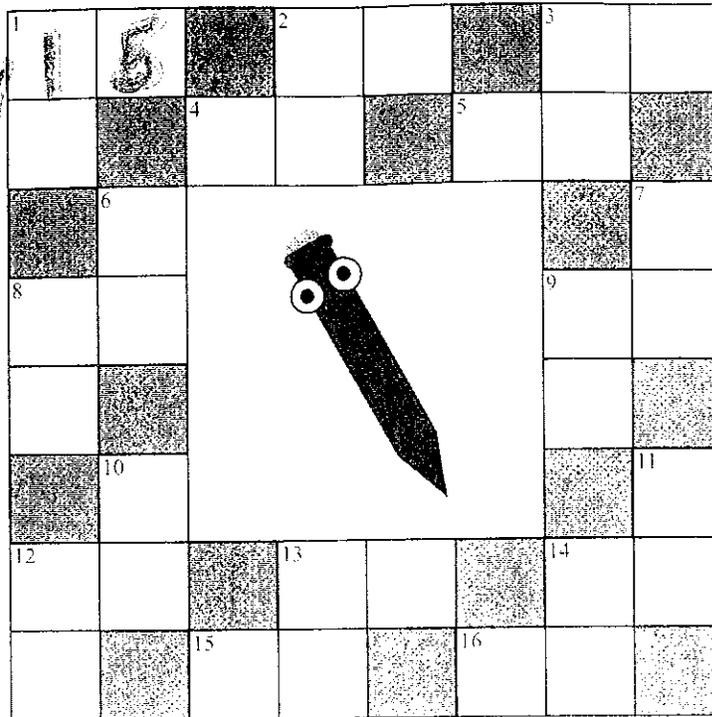
Example:
$2(2 + x) = 34$
$4 + \ldots = 34$

ACROSS

1. $2(2 + x) = 34$
2. $4(3n + 3) = 144$
3. $v(3 + 5) = 128$
4. $q(5 - 2) = 36$
5. $y(5 - 4) = 153$
8. $-(1 - 4t) = -61$
9. $-2(-3z - 3) = 84$
12. $r(5 - 3) = 240$
13. $2y(11 + 5) = 480$
14. $-n(-2 - 3) = -20$
15. $2(3v + 5) = 154$
16. $2(6z - 2) = 136$

DOWN

1. $2(3 - 3x) = -90$
2. $e(-7 - 4) = -36$
3. $-x(6 - 4) = -34$
6. $-(4v - 7) = -107$
7. $2r(-1 + 4) = 90$
8. $2(6 + 2n) = 68$
9. $-2(-3z - 3) = 78$
10. $r(1 - 3) = 160$
11. $2y(10 - 5) = 300$
12. $-n(-2 - 3) = -30$
13. $2(3v + 5) = 94$
14. $2(6z - 2) = 256$

AMI Algebra I: Day 20

1. What do you get when you cross a porcupine with a gopher?

$$\overline{}\ \overline{}\ \overline{}\ \overline{}\ \overline{}\ \overline{}\ \overline{}\ \overline{}\ \overline{}\ \overline{}\ \overline{}\ \overline{}\ \overline{}\ \overline{}\ \overline{}\ \overline{}$$

20 0 22 81 81 62 1 7 32 0 60 1 62 20 24 26

2. What do you get when you cross a pelican with a lightning bolt?

20 100 32 8 62 1 62 90 0 5 32 90 100 32 1 1
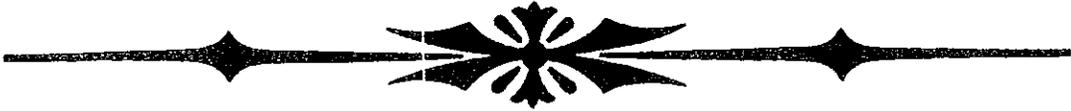
TO DECODE THE ANSWERS TO THESE TWO QUESTIONS:

Evaluate each expression below using the values

$$a = 1,\ b = 2,\ c = 3,\ w = 0,\ x = 10,\ \text{and } y = 6.$$

Each time your answer appears in the code, write the letter of that exercise above it.

(H) $xy =$

(A) $b + (cy)$

(W) $x - (ac)$

(S) $(7b) + (4c)$

(E) $(8x) - (3y)$

(U) $(ax) + (by)$

(B) $(2x) \cdot (b + c)$

(G) $\dfrac{(x + y)}{(c - a)}$

(R) $\dfrac{(xy)}{(x + b)}$

(T) $\dfrac{(wa)}{b}$

(K) $(x - y) \cdot (y - w)$

(N) $c \cdot (y + c) \cdot (y - c)$

(C) $\dfrac{(3x)}{b} \cdot (abc)$

(I) $(8bc) - (w + x + y)$

(L) $\dfrac{(x - b)}{(y + b)}$

AMI Algebra I: Day 21

Distance Formula

Example: Find the distance between the points $(5, -1)$ and $(3, 7)$.

$$\text{Distance} = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

$$= \sqrt{(3-5)^2 + (7+1)^2}$$

$$= \sqrt{(-2)^2 + (8)^2} \;=\; \sqrt{4+64} \;=\; \sqrt{68} \;\approx\; \textbf{8.25 units}$$

Find the distance between the points. Round the answer to two decimal places.

1) $(1, 3),\; (5, 7)$

$$x_1\, y_1 \quad x_2\, y_2$$
$$\sqrt{(5-1)^2 + (7-3)^2} = \sqrt{32}$$
$$\approx 5.66$$

2) $(-8, -9),\; (-4, -10)$

3) $(10, 6),\; (1, -4)$

4) $(3, 2),\; (8, 2)$

5) $(9, -3),\; (-1, 8)$

6) $(10, 0),\; (0, 4)$

7) $(-7, -2),\; (6, 9)$

8) $(-6, 5),\; (8, -3)$

9) $(-5, -6),\; (-9, -4)$

10) $(2, 0),\; (-7, 1)$

AMI Algebra I: Day 22

Find the Slope from the Pair of Points

1) (-3,-5) (-2,5)   slope = _____   2) (-5,0) (5,-4)   slope = _____

3) (3,3) (5,-2)   slope = _____   4) (-5,4) (5,-3)   slope = _____

5) (-4,-5) (3,5)   slope = _____   6) (-2,-5) (0,5)   slope = _____

7) (-4,-2) (0,5)   slope = _____   8) (-1,2) (-3,4)   slope = _____

9) (-5,2) (5,-1)   slope = _____   10) (0,-4) (3,0)   slope = _____

AMI Algebra I: Day 23

1) Melanie spent half of her allowance going to the movies. She washed the family
car and earned 6 dollars. What is her weekly allowance if she ended with
16 dollars ?

_____

2) Benny sold half of his comic books and then bought 8 more. He now has
12. How many did he begin with ?

_____

3) Dan had 60 dollars to spend on 6 books. After
buying them he had 18 dollars. How much did each book cost ?

_____

4) The sum of three consecutive numbers is 99.
What is the smallest of the three numbers ?

_____

5) Oceanside Bike Rental Shop charges 14 dollars plus 7 dollars an
hour for renting a bike. Melanie paid 56 dollars to rent a bike. How many
hours did she pay to have the bike checked out ?

_____

6) Keith bought 6 new baseball trading cards to add to his collection. The next
day his dog ate half of his collection. There are now only 47 cards left.
How many cards did Keith start with ?

_____

7) The sum of three consecutive even numbers is 168.
What is the smallest of the three numbers ?

_____

8) Mike bought a soft drink for 4 dollars and 7 candy bars. He spent
a total of 39 dollars. How much did each candy bar cost ?

_____

9) On Monday, 467 students went on a trip to the zoo. All 9
buses were filled and 8 students had to travel in cars. How many students were
in each bus ?

_____

10) The sum of three consecutive odd numbers is 135.
What is the smallest of the three numbers ?

_____

AMI Algebra I: Day 24

1. Solve for x: $2(x+7) - 3(2x-4) = -18$

6. John has mowed 3 lawns. If he can mow 2 lawns per hour, which equation describes the number of lawns, m, he can complete after h, more hours?
   A. $m + h = 5$
   B. $h = 2m + 3$
   C. $m = 2h + 3$
   D. $m = 3h + 2$

7. Simplify: $(-3a^2b^2)(4a^5b^3)^3$

   A. $-192a^8b^5$
   B. $-12a^{17}b^{11}$

   C. $-12a^8b^5$
   D. $-192a^{17}b^{11}$

8. Multiply: $(2x+5)(3x^2 - 2x - 4)$

10. What is the greatest common factor of: $12a^4b^2 - 3a^2b^5$?

   A. $12a^2b^2$
   B. $3a^4b^5$
   C. $3a^2b^2$
   D. $12a^4b^5$

11. Given $f(x) = 5x - 4$, find the value of x if $f(x) = 31$

   A. 7
   B. 27/5

   C. 151
   D. -7

14. Simplify:

$$\frac{2a^2b^4}{a^3b^2} \cdot \left(\frac{2a^2b}{3a^4b^5}\right)^{-2}$$

A. $\dfrac{8}{9a^5b^6}$

C. $3a^3b^{10}$

B. $\dfrac{9a^3b^{10}}{2}$

D. $9a^3b^{10}$

15. Judy had $35 in her savings account in January. By November she had $2500 in her account. What is Judy's rate of change between January and November?

A. $253.50 per month

B. $246.50 per month

C. $211.25 per month

D. None of the Above

16. Simplify: $(3x^4 + 3x^2 - x + 5) - 3(x^4 + x^3 - 2x^2 - 6)$

10. $\dfrac{50x^4}{25x^9}$

12. $6g^{-2} \cdot 4g^4$

14. $14q^0$

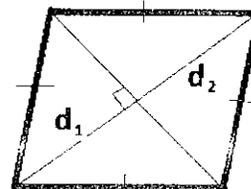16. $\dfrac{10v^0w^6}{2v^{-3}w^{15}}$
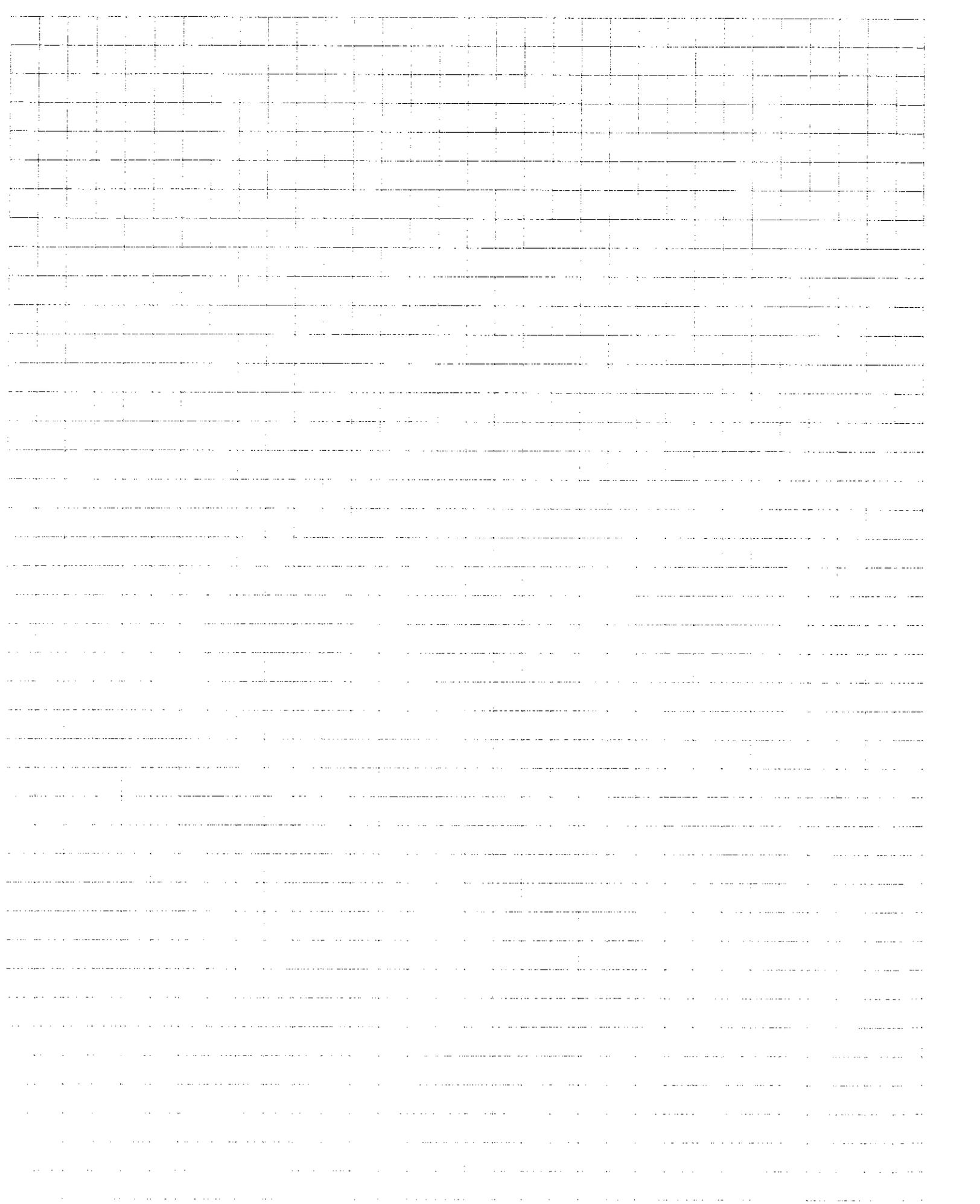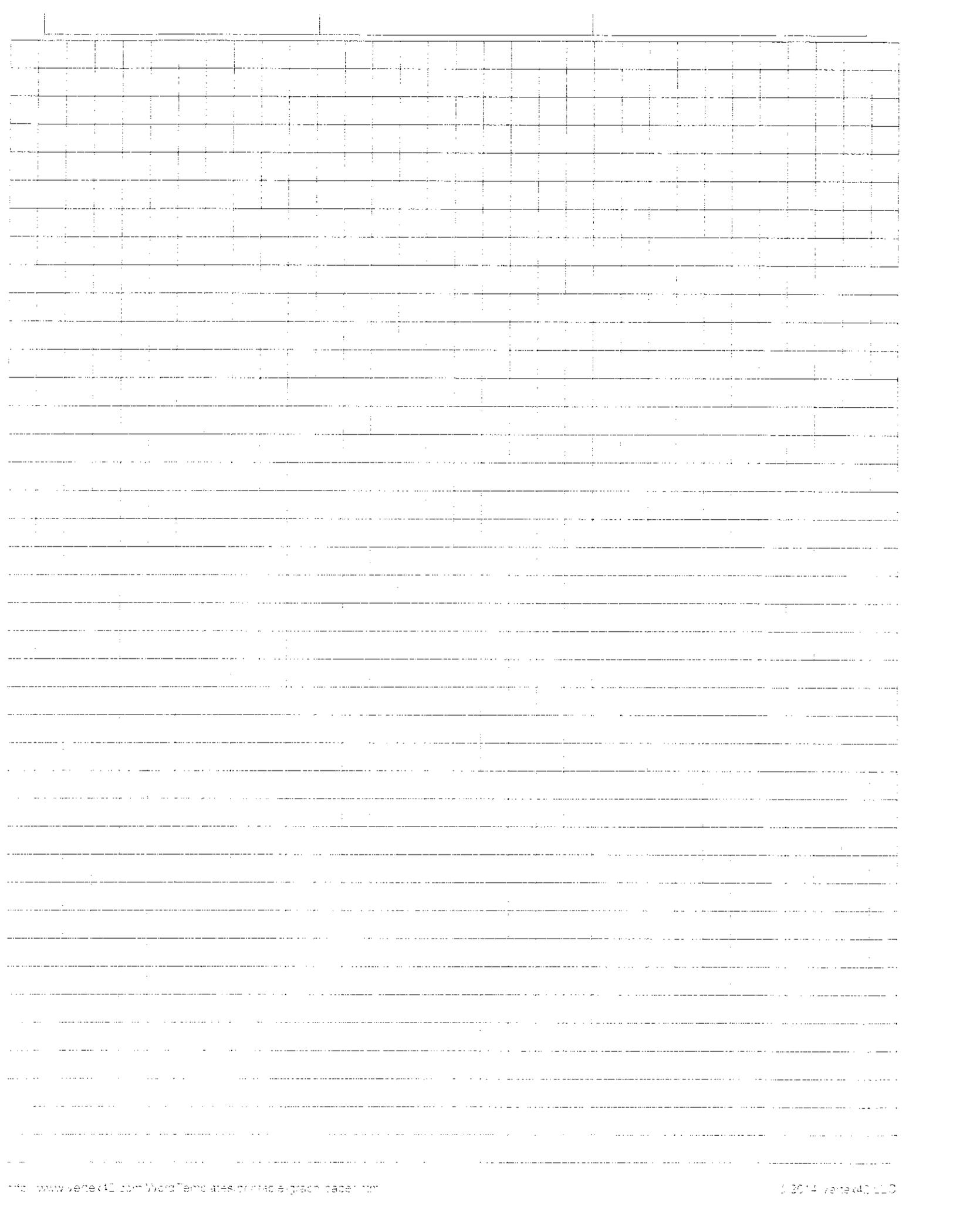
MATHEMATICS REFERENCE SHEET

Parallelogram

$P =$ sum of all sides

$A = bh$

Trapezoid
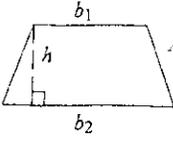
$A = \dfrac{h(b_1 + b_2)}{2}$

Arc and Sector
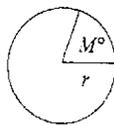
Arc Length $= \left(\dfrac{M}{360}\right) \times 2\pi r$

Sector area $= \left(\dfrac{M}{360}\right) \times \pi r^2$

Triangle
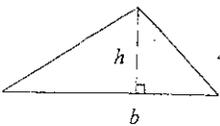
$P =$ sum of all sides

$A = \dfrac{bh}{2}$

Rectangle

$P = 2l + 2w$

$A = l\,w$

30° -60° -90°
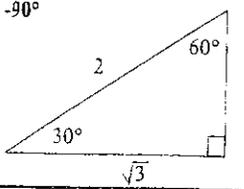
Circle
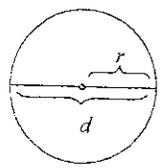
$C = 2\pi r$

$C = \pi d$

$A = \pi r^2$

$\pi \approx 3.14$

Pythagorean Theorem

$a^2 + b^2 = c^2$
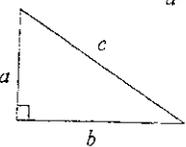
45° -45° -90°
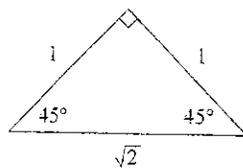
Rectangular Solid
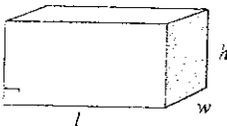
Volume $= lwh$

Surface area $= 2lw + 2lh + 2wh$

Pyramid

$B =$ area of base (shaded)

Volume $= \dfrac{Bh}{3}$
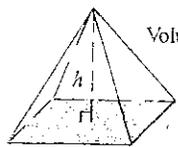
Trigonometric Ratios
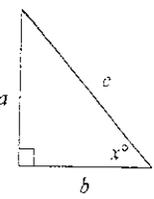
$\sin x° = \dfrac{a}{c}$

$\cos x° = \dfrac{b}{c}$

$\tan x° = \dfrac{a}{b}$

Cylinder
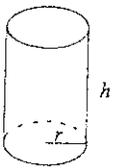
Volume $= \pi r^2 h$

Surface area $= 2\pi rh + 2\pi r^2$

Cone

$l =$ slant height

Volume $= \dfrac{\pi r^2 h}{3}$
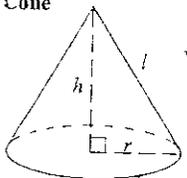
Surface area $= \pi rl + \pi r^2$

Sphere
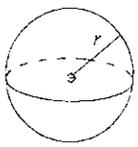
Volume $= \dfrac{4\pi r^3}{3}$

Surface area $= 4\pi r^2$

Miscellaneous Formulas

Area of an equilateral triangle	$A = \dfrac{s^2\sqrt{3}}{4}$	$s =$ length of a side
Distance	rate $\times$ time	
Interest	principal $\times$ rate $\times$ time in years	
Sum of the angles of a polygon having n sides	$(n-2)180°$	
Distance between points on a coordinate plane	$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$	
Midpoint	$\left(\dfrac{x_2 + x_1}{2}, \dfrac{y_2 + y_1}{2}\right)$	
Slope of a nonvertical line (where $x_2 \neq x_1$)	$m = \dfrac{y_2 - y_1}{x_2 - x_1}$	
Slope intercept (where $m =$ slope, $b =$ intercept)	$y = mx + b$	
Last term of an arithmetic series	$a_n = a + (n-1)d$	
Last term of a geometric series (where $n \geq 1$)	$a_n = ar^{n-1}$	
Quadratic formula	$x = \dfrac{-b \pm \sqrt{b^2 - 4ac}}{2a}$	
Area of a square	$A = s^2$	
Volume of a cube	$V = s^3$	
Area of a regular polygon	$A = \dfrac{1}{2}ap$	$a =$ apothem, $p =$ perimeter

Kite
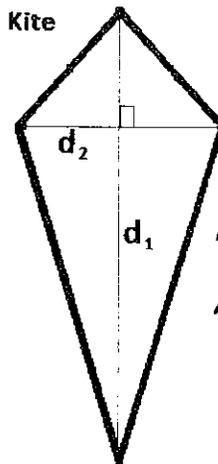
$P =$ sum of all sides

$A = \dfrac{1}{2} \cdot d_1 \cdot d_2$

Rhombus

$P =$ sum of all sides

$A = \dfrac{1}{2} \cdot d_1 \cdot d_2$