

Name: \_\_\_\_\_



Park Forest/Chicago Heights  
School District 163  
Summer Learning Packet

# Entering 8th

\*Please complete this packet during your summer break and turn it in on the first day of school to qualify for the incentive.

**Contents include:** Math Fluency, TTM Requirements, Math Activities, Reading Log, Refugee Novel Study/Activities, Refugee Playlist Project and Enrichment Activities.

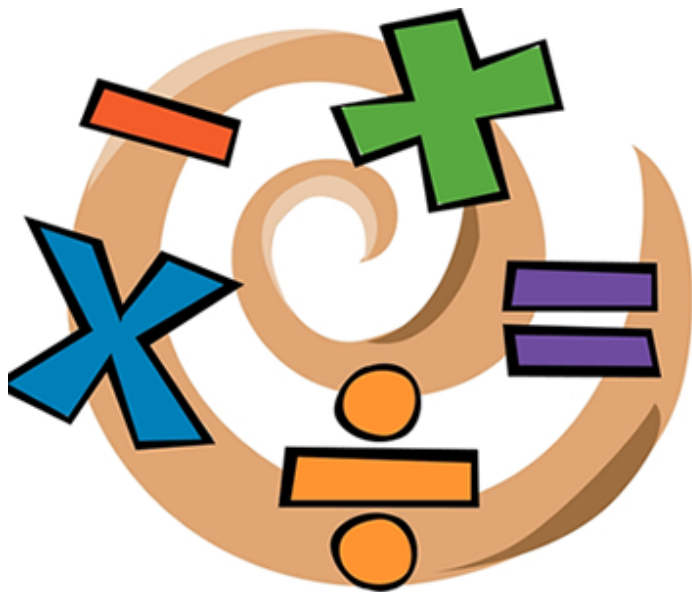
# Think Through Math Summer Requirements



*All students are required to pass their pathway over the summer. Students will use the same login and password information. The expectation is for every student to pass two lessons per week until they complete/pass their summer pathway.*



# Math Fluency



Practicing  
Math  
Fluency  
Skills

Number Correct: \_\_\_\_\_

Improvement: \_\_\_\_\_

Greatest Common Factor—Round 2

**Directions:** Determine the greatest common factor of each pair of numbers.

1.	GCF of 20 and 80	
2.	GCF of 10 and 70	
3.	GCF of 9 and 36	
4.	GCF of 12 and 24	
5.	GCF of 15 and 45	
6.	GCF of 10 and 95	
7.	GCF of 9 and 45	
8.	GCF of 18 and 33	
9.	GCF of 12 and 32	
10.	GCF of 16 and 56	
11.	GCF of 40 and 72	
12.	GCF of 35 and 63	
13.	GCF of 30 and 75	
14.	GCF of 42 and 72	
15.	GCF of 30 and 28	

16.	GCF of 33 and 99	
17.	GCF of 38 and 76	
18.	GCF of 26 and 65	
19.	GCF of 39 and 48	
20.	GCF of 72 and 88	
21.	GCF of 21 and 56	
22.	GCF of 28 and 52	
23.	GCF of 51 and 68	
24.	GCF of 48 and 84	
25.	GCF of 21 and 63	
26.	GCF of 64 and 80	
27.	GCF of 36 and 90	
28.	GCF of 28 and 98	
29.	GCF of 39 and 91	
30.	GCF of 38 and 95	

Number Correct: \_\_\_\_\_

Improvement: \_\_\_\_\_

Rational Numbers: Inequality Statements—Round 2

**Directions:** Work in numerical order to answer Problems 1–33. Arrange each set of numbers in order according to the inequality symbols.

1. $\square < \square < \square$ $1/7, -1/7, 0$	12. $\square > \square > \square$ $1 \frac{1}{4}, 1, 1 \frac{1}{2}$	23. $\square > \square > \square$ $1, 1 \frac{3}{4}, -1 \frac{3}{4}$
2. $\square > \square > \square$ $1/7, -1/7, 0$	13. $\square > \square > \square$ $11 \frac{1}{4}, 11, 11 \frac{1}{2}$	24. $\square < \square < \square$ $1, 1 \frac{3}{4}, -1 \frac{3}{4}$
3. $\square < \square < \square$ $3/7, 2/7, -1/7$	14. $\square < \square < \square$ $11 \frac{1}{4}, 11, 11 \frac{1}{2}$	25. $\square > \square > \square$ $-82, -93, -104$
4. $\square > \square > \square$ $3/7, 2/7, -1/7$	15. $\square < \square < \square$ $0, 0.2, -0.1$	26. $\square < \square < \square$ $-82, -93, -104$
5. $\square > \square > \square$ $-4/5, 1/5, -1/5$	16. $\square > \square > \square$ $0, 0.2, -0.1$	27. $\square > \square > \square$ $0.5, 1, 0.6$
6. $\square < \square < \square$ $-4/5, 1/5, -1/5$	17. $\square > \square > \square$ $1, 0.7, 1/10$	28. $\square > \square > \square$ $-0.5, -1, -0.6$
7. $\square < \square < \square$ $-8/9, 5/9, 1/9$	18. $\square < \square < \square$ $1, 0.7, 1/10$	29. $\square < \square < \square$ $-0.5, -1, -0.6$
8. $\square > \square > \square$ $-8/9, 5/9, 1/9$	19. $\square < \square < \square$ $0, -12, -12 \frac{1}{2}$	30. $\square < \square < \square$ $1, 8, 9$
9. $\square > \square > \square$ $-30, -10, -50$	20. $\square > \square > \square$ $0, -12, -12 \frac{1}{2}$	31. $\square < \square < \square$ $-1, -8, -9$
10. $\square < \square < \square$ $-30, -10, -50$	21. $\square < \square < \square$ $5, -1, 0$	32. $\square > \square > \square$ $-2, -3, -5$
11. $\square > \square > \square$ $-40, -20, -60$	22. $\square < \square < \square$ $-5, 1, 0$	33. $\square > \square > \square$ $2, 3, 5$

Number Correct: \_\_\_\_\_

Addition and Subtraction Equations—Round 1

**Directions:** Find the value of  $m$  in each equation.

1.	$m + 4 = 11$	
2.	$m + 2 = 5$	
3.	$m + 5 = 8$	
4.	$m - 7 = 10$	
5.	$m - 8 = 1$	
6.	$m - 4 = 2$	
7.	$m + 12 = 34$	
8.	$m + 25 = 45$	
9.	$m + 43 = 89$	
10.	$m - 20 = 31$	
11.	$m - 13 = 34$	
12.	$m - 45 = 68$	
13.	$m + 34 = 41$	
14.	$m + 29 = 52$	
15.	$m + 37 = 61$	
16.	$m - 43 = 63$	
17.	$m - 21 = 40$	

18.	$m - 54 = 37$	
19.	$4 + m = 9$	
20.	$6 + m = 13$	
21.	$2 + m = 31$	
22.	$15 = m + 11$	
23.	$24 = m + 13$	
24.	$32 = m + 28$	
25.	$4 = m - 7$	
26.	$3 = m - 5$	
27.	$12 = m - 14$	
28.	$23.6 = m - 7.1$	
29.	$14.2 = m - 33.8$	
30.	$2.5 = m - 41.8$	
31.	$64.9 = m + 23.4$	
32.	$72.2 = m + 38.7$	
33.	$1.81 = m - 15.13$	
34.	$24.68 = m - 56.82$	

Number Correct: \_\_\_\_\_

Improvement: \_\_\_\_\_

Addition and Subtraction Equations—Round 2

**Directions:** Find the value of  $m$  in each equation.

1.	$m + 2 = 7$	
2.	$m + 4 = 10$	
3.	$m + 8 = 15$	
4.	$m + 7 = 23$	
5.	$m + 12 = 16$	
6.	$m - 5 = 2$	
7.	$m - 3 = 8$	
8.	$m - 4 = 12$	
9.	$m - 14 = 45$	
10.	$m + 23 = 40$	
11.	$m + 13 = 31$	
12.	$m + 23 = 48$	
13.	$m + 38 = 52$	
14.	$m - 14 = 27$	
15.	$m - 23 = 35$	
16.	$m - 17 = 18$	
17.	$m - 64 = 1$	

18.	$6 = m + 3$	
19.	$12 = m + 7$	
20.	$24 = m + 16$	
21.	$13 = m + 9$	
22.	$32 = m - 3$	
23.	$22 = m - 12$	
24.	$34 = m - 10$	
25.	$48 = m + 29$	
26.	$21 = m + 17$	
27.	$52 = m + 37$	
28.	$\frac{6}{7} = m + \frac{4}{7}$	
29.	$\frac{2}{3} = m - \frac{5}{3}$	
30.	$\frac{1}{4} = m - \frac{8}{3}$	
31.	$\frac{5}{6} = m - \frac{7}{12}$	
32.	$\frac{7}{8} = m - \frac{5}{12}$	
33.	$\frac{7}{6} + m = \frac{16}{3}$	
34.	$\frac{1}{3} + m = \frac{13}{15}$	

Number Correct: \_\_\_\_\_

Improvement: \_\_\_\_\_

Integer Multiplication—Round 2

**Directions:** Determine the product of the integers, and write it in the column to the right.

1.	$-9 \bullet -7$	
2.	$0 \bullet -4$	
3.	$3 \bullet -5$	
4.	$6 \bullet -8$	
5.	$-2 \bullet 1$	
6.	$-6 \bullet 5$	
7.	$-10 \bullet -12$	
8.	$11 \bullet -4$	
9.	$3 \bullet 8$	
10.	$12 \bullet -7$	
11.	$-1 \bullet 8$	
12.	$5 \bullet -10$	
13.	$3 \bullet -13$	
14.	$15 \bullet -8$	
15.	$-9 \bullet 14$	
16.	$-17 \bullet 5$	
17.	$16 \bullet 2$	
18.	$19 \bullet -7$	
19.	$-6 \bullet 13$	
20.	$1 \bullet -18$	
21.	$-14 \bullet -3$	
22.	$-10 \bullet -17$	

23.	$-22 \bullet 14$	
24.	$-18 \bullet -32$	
25.	$-24 \bullet 19$	
26.	$47 \bullet 21$	
27.	$17 \bullet -39$	
28.	$-16 \bullet -28$	
29.	$-67 \bullet -81$	
30.	$-36 \bullet 44$	
31.	$-50 \bullet 23$	
32.	$66 \bullet -71$	
33.	$82 \bullet -29$	
34.	$-32 \bullet 231$	
35.	$89 \bullet -744$	
36.	$623 \bullet -22$	
37.	$-870 \bullet -46$	
38.	$179 \bullet 329$	
39.	$-956 \bullet 723$	
40.	$874 \bullet -333$	
41.	$908 \bullet -471$	
42.	$-661 \bullet -403$	
43.	$-520 \bullet -614$	
44.	$-309 \bullet 911$	



Number Correct: \_\_\_\_\_

Generating Equivalent Expressions—Round 1

**Directions:** Write each as an equivalent expression in standard form as quickly and accurately as possible within the allotted time.

1.	$1 + 1$	
2.	$1 + 1 + 1$	
3.	$(1 + 1) + 1$	
4.	$(1 + 1) + (1 + 1)$	
5.	$(1 + 1) + (1 + 1 + 1)$	
6.	$x + x$	
7.	$x + x + x$	
8.	$(x + x) + x$	
9.	$(x + x) + (x + x)$	
10.	$(x + x) + (x + x + x)$	
11.	$(x + x + x) + (x + x + x)$	
12.	$2x + x$	
13.	$3x + x$	
14.	$4x + x$	
15.	$7x + x$	
16.	$7x + 2x$	
17.	$7x + 3x$	
18.	$10x - x$	
19.	$10x - 5x$	
20.	$10x - 10x$	
21.	$10x - 11x$	
22.	$10x - 12x$	

23.	$4x + 6x - 12x$	
24.	$4x - 6x + 4x$	
25.	$7x - 2x + 3$	
26.	$(4x + 3) + x$	
27.	$(4x + 3) + 2x$	
28.	$(4x + 3) + 3x$	
29.	$(4x + 3) + 5x$	
30.	$(4x + 3) + 6x$	
31.	$(11x + 2) - 2$	
32.	$(11x + 2) - 3$	
33.	$(11x + 2) - 4$	
34.	$(11x + 2) - 7$	
35.	$(3x - 9) + (3x + 5)$	
36.	$(11 - 5x) + (4x + 2)$	
37.	$(2x + 3y) + (4x + y)$	
38.	$(5x + 1.3y) + (2.9x - 0.6y)$	
39.	$(2.6x - 4.8y) + (6.5x - 1.1y)$	
40.	$\left(\frac{3}{4}x - \frac{1}{2}y\right) + \left(-\frac{7}{4}x - \frac{5}{2}y\right)$	
41.	$\left(-\frac{2}{5}x - \frac{7}{9}y\right) + \left(-\frac{7}{10}x - \frac{2}{3}y\right)$	
42.	$\left(\frac{1}{2}x - \frac{1}{4}y\right) + \left(-\frac{3}{5}x + \frac{5}{6}y\right)$	
43.	$\left(1.2x - \frac{3}{4}y\right) - \left(-\frac{3}{5}x + 2.25x\right)$	
44.	$(3.375x - 8.9y) - \left(-7\frac{5}{8}x - 5\frac{2}{5}y\right)$	

Number Correct: \_\_\_\_\_

Improvement: \_\_\_\_\_

Generating Equivalent Expressions—Round 2

**Directions:** Write each as an equivalent expression in standard form as quickly and accurately as possible within the allotted time.

1.	$1 + 1 + 1$	
2.	$1 + 1 + 1 + 1$	
3.	$(1 + 1 + 1) + 1$	
4.	$(1 + 1 + 1) + (1 + 1)$	
5.	$(1 + 1 + 1) + (1 + 1 + 1)$	
6.	$x + x + x$	
7.	$x + x + x + x$	
8.	$(x + x + x) + x$	
9.	$(x + x + x) + (x + x)$	
10.	$(x + x + x) + (x + x + x)$	
11.	$(x + x + x + x) + (x + x)$	
12.	$x + 2x$	
13.	$x + 4x$	
14.	$x + 6x$	
15.	$x + 8x$	
16.	$7x + x$	
17.	$8x + 2x$	
18.	$2x - x$	
19.	$2x - 2x$	
20.	$2x - 3x$	
21.	$2x - 4x$	
22.	$2x - 8x$	

23.	$3x + 5x - 4x$	
24.	$8x - 6x + 4x$	
25.	$7x - 4x + 5$	
26.	$(9x - 1) + x$	
27.	$(9x - 1) + 2x$	
28.	$(9x - 1) + 3x$	
29.	$(9x - 1) + 5x$	
30.	$(9x - 1) + 6x$	
31.	$(-3x + 3) - 2$	
32.	$(-3x + 3) - 3$	
33.	$(-3x + 3) - 4$	
34.	$(-3x + 3) - 5$	
35.	$(5x - 2) + (2x + 5)$	
36.	$(8 - x) + (3x + 2)$	
37.	$(5x + y) + (x + y)$	
38.	$\left(\frac{5}{2}x + \frac{3}{2}y\right) + \left(\frac{11}{2}x - \frac{3}{4}y\right)$	
39.	$\left(\frac{1}{6}x - \frac{3}{8}y\right) + \left(\frac{2}{3}x - \frac{7}{4}y\right)$	
40.	$(9.7x - 3.8y) + (-2.8x + 4.5y)$	
41.	$(1.65x - 2.73y) + (-1.35x + 3.76y)$	
42.	$(6.51x - 4.39y) + (-7.46x + 8.11x)$	
43.	$\left(0.7x - \frac{2}{9}y\right) - \left(-\frac{7}{5}x + 2\frac{1}{3}x\right)$	
44.	$(8.4x - 2.25y) - \left(-2\frac{1}{2}x - 4\frac{3}{8}y\right)$	

Number Correct: \_\_\_\_\_

Fractions, Decimals, and Percents—Round 1

Directions: Write each number in the alternate form indicated.

1.	$\frac{20}{100}$ as a percent	
2.	$\frac{40}{100}$ as a percent	
3.	$\frac{80}{100}$ as a percent	
4.	$\frac{85}{100}$ as a percent	
5.	$\frac{95}{100}$ as a percent	
6.	$\frac{100}{100}$ as a percent	
7.	$\frac{10}{10}$ as a percent	
8.	$\frac{1}{1}$ as a percent	
9.	$\frac{1}{10}$ as a percent	
10.	$\frac{2}{10}$ as a percent	
11.	$\frac{4}{10}$ as a percent	
12.	75% as a decimal	
13.	25% as a decimal	
14.	15% as a decimal	
15.	10% as a decimal	
16.	5% as a decimal	
17.	30% as a fraction	
18.	60% as a fraction	
19.	90% as a fraction	
20.	50% as a fraction	
21.	25% as a fraction	
22.	20% as a fraction	

23.	$\frac{9}{10}$ as a percent	
24.	$\frac{9}{20}$ as a percent	
25.	$\frac{9}{25}$ as a percent	
26.	$\frac{9}{50}$ as a percent	
27.	$\frac{9}{75}$ as a percent	
28.	$\frac{18}{75}$ as a percent	
29.	$\frac{36}{75}$ as a percent	
30.	96% as a fraction	
31.	92% as a fraction	
32.	88% as a fraction	
33.	44% as a fraction	
34.	22% as a fraction	
35.	3% as a decimal	
36.	30% as a decimal	
37.	33% as a decimal	
38.	33.3% as a decimal	
39.	3.3% as a decimal	
40.	0.3% as a decimal	
41.	$\frac{1}{3}$ as a percent	
42.	$\frac{1}{9}$ as a percent	
43.	$\frac{2}{9}$ as a percent	
44.	$\frac{8}{9}$ as a percent	

Number Correct: \_\_\_\_\_

**Applying Properties of Exponents to Generate Equivalent Expressions I—Round 1**

**Directions:** Simplify each expression using the laws of exponents. Use the least number of bases possible and only positive exponents. All letters denote numbers.

1.	$2^2 \cdot 2^3$	
2.	$2^2 \cdot 2^4$	
3.	$2^2 \cdot 2^5$	
4.	$3^7 \cdot 3^1$	
5.	$3^8 \cdot 3^1$	
6.	$3^9 \cdot 3^1$	
7.	$7^6 \cdot 7^2$	
8.	$7^6 \cdot 7^3$	
9.	$7^6 \cdot 7^4$	
10.	$11^{15} \cdot 11$	
11.	$11^{16} \cdot 11$	
12.	$2^{12} \cdot 2^2$	
13.	$2^{12} \cdot 2^4$	
14.	$2^{12} \cdot 2^6$	
15.	$99^5 \cdot 99^2$	
16.	$99^6 \cdot 99^3$	
17.	$99^7 \cdot 99^4$	
18.	$5^8 \cdot 5^2$	
19.	$6^8 \cdot 6^2$	
20.	$7^8 \cdot 7^2$	
21.	$r^8 \cdot r^2$	
22.	$s^8 \cdot s^2$	

23.	$6^3 \cdot 6^2$	
24.	$6^2 \cdot 6^3$	
25.	$(-8)^3 \cdot (-8)^7$	
26.	$(-8)^7 \cdot (-8)^3$	
27.	$(0.2)^3 \cdot (0.2)^7$	
28.	$(0.2)^7 \cdot (0.2)^3$	
29.	$(-2)^{12} \cdot (-2)^1$	
30.	$(-2.7)^{12} \cdot (-2.7)^1$	
31.	$1.1^6 \cdot 1.1^9$	
32.	$57^6 \cdot 57^9$	
33.	$x^6 \cdot x^9$	
34.	$2^7 \cdot 4$	
35.	$2^7 \cdot 4^2$	
36.	$2^7 \cdot 16$	
37.	$16 \cdot 4^3$	
38.	$3^2 \cdot 9$	
39.	$3^2 \cdot 27$	
40.	$3^2 \cdot 81$	
41.	$5^4 \cdot 25$	
42.	$5^4 \cdot 125$	
43.	$8 \cdot 2^9$	
44.	$16 \cdot 2^9$	

# Math Directions

## Pre-Algebra Review

$$24 \div 4 \times 3$$

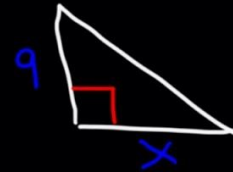
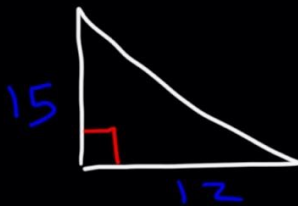
$$8 - 5 \times 4$$

$$\frac{21 \times y^2}{63 \times y}$$

$$17\% \text{ of } 900 \text{ ?}$$

$$63 \times y$$

$$\frac{2}{3}x = 9$$



The following pages will help you prepare for 8th grade math by reviewing concepts you studied during 7th grade. Please use these helpful websites for further information on each skill and the information on the next page.

[www.virtualnerd.com/middle-math/all](http://www.virtualnerd.com/middle-math/all)

[www.purplemath.com/modules/index.htm](http://www.purplemath.com/modules/index.htm)

[www.khanacademy.com](http://www.khanacademy.com)

## TOPICS

- **ADDING INTEGERS**- add integers with the same sign and subtract integers with different signs
  - Example:  $-2 + -4 = -6$  and  $5 + (-2) = 3$
- **SUBTRACTING INTEGERS**- add its opposite
  - Example:  $5 - (-3) = 8$  and  $-6 - (-3) = -3$
- **MULTIPLYING/DIVIDING INTEGERS**- the product or quotient of two integers with different signs is negative and the product or quotient of two integers with the same sign is positive.
  - Example:  $5(-3) = -15$  and  $(-6)(-4) = 24$       Example:  $-14/2 = -7$  and  $-20/-4 = 5$
- **THE DISTRIBUTIVE PROPERTY**- combines multiplication with addition or subtraction
  - Example:  $3(x + 2) = 3x + 6$  and  $4(y - 3) = 4y - 12$
- **ORDER OF OPERATIONS**- Evaluate the expressions inside the parenthesis, multiply and/or divide from left to right, and then add and/or subtract from left to right. (PEMDAS)
  - Example:  $5(6 + 1) - 3*3 = 26$
- **EVALUATE EXPRESSIONS**- replace the variable(s) with known values and follow order of operations.
  - Example: Evaluate when  $x = 2$  and  $y = 3$ ;  $5xy + x = 5(2)(3) + 2 = 32$
- **ONE STEP EQUATIONS/ TWO STEP EQUATIONS**- An equation is a mathematical statement that has two expressions separated by an equal sign. The expression on the left side of the equal sign has the same value as the expression on the right side. To solve an equation means to determine a numerical value for a variable that makes this statement true by isolating or moving everything except the variable to one side of the equation. To do this, combine like terms on each side, then add or subtract the same value from both sides. Remember to keep both sides of an equation equal, you must do exactly the same thing to each side of the equation.
  - Example: Solve:  $x + 5 = 11$ ; subtract 5 on both sides;  $x = 6$  and  $2x - 3 = 13$ ; add 3 on both sides, then divide by 2;  $x = 8$
- **PLOTING POINTS**- The first coordinate of a plotted point is called the 'x' coordinate. The 'x' coordinate is the horizontal distance from the origin to the plotted point. The second coordinate of a plotted point is called the 'y' coordinate. The 'y' coordinate is the vertical distance from the origin to the plotted point.
  - Example: to locate the point: (2, 3) on our graph below, we start at the origin and move 2 units horizontally and 3 units vertically
- **ROUND DECIMALS** – Understand the place values 2.375; “2” is the number of ones; “3” is the number of tenths; “7” is the number of hundredths; “5” is the number of thousandths. Next find the place value you want to round to then look at one place value to the right based on the number in this place, you’ll round either up if the number is 5 or greater or keep the value if it is less than 5.
  - Example: round 12.8953 to the tenths place value; the 8 is in the tenths place value refer to the 9 to determine that the 8 needs to be rounded to a 9 = 12.9

ADDING/SUBTRACTING INTEGERS - DO NOT USE A CALCULATOR

Simplify each expression.

1.  $-3 + (-2) =$

7.  $5 - 11 =$

2.  $-2 + (-1) + 6 =$

8.  $11.08 - 3.6 =$

3.  $9 + (-4) + 3 =$

9.  $-7y - (-12y) =$

4.  $-6.3 + 7.4 =$

10.  $15xy - (-6xy) =$

5.  $-10t + 9t =$

11.  $-53va - 32va =$

6.  $3y + 6y + (-10y) =$

12.  $4x - (-3x) + 5y - 4y =$

MULTIPLYING/ DIVIDING INTEGERS-DO NOT USE A CALCULATOR

1. Positive (Positive) = \_\_\_\_\_

10. Positive / (Positive) = \_\_\_\_\_

2. Positive (Negative) = \_\_\_\_\_

11. Positive / (Negative) = \_\_\_\_\_

3. Negative(Positive) = \_\_\_\_\_

12. Negative / (Positive) = \_\_\_\_\_

4. Negative(Negative) = \_\_\_\_\_

13. Negative / (Negative) = \_\_\_\_\_

5.  $-4(-15) =$

14.  $-21 \div (-7) =$

6.  $2.3(-5.1) =$

15.  $\frac{0}{-6} =$

7.  $(-3)(-9)(2) =$

16.  $64 / 0.8 =$

8.  $(8)(-2)(1) =$

17.  $-24 / (-8) =$

9.  $\frac{12}{-6} =$

18.  $-5.6 / 7 =$



THE DISTRIBUTIVE PROPERTY - DO NOT USE A CALCULATOR

Use the distributive property to write expression as an equivalent expression.

1.  $3(x + 2) =$

2.  $-2(c + 7) =$

3.  $-15(4 + n) =$

4.  $(x + 3)(-3) =$

5.  $8(x + 60) =$

6.  $-(x - 3) + 6 =$

ORDER OF OPERATIONS – DO NOT USE A CALCULATOR

Evaluate each expression.

1.  $6 + 3(9) =$

2.  $\frac{60}{5(3)} =$

3.  $2(6 + 2) - 4(3) =$

4.  $8(7) - 14 + 2 =$

5.  $-3(4 + 5) + -9 =$

EVALUATING EXPRESSIONS – DO NOT USE A CALCULATOR

Evaluate each expression if  $x = 10$ ,  $y = -5$ , and  $z = 1$ .

1.  $\frac{x}{y}$

2.  $xy + z$

3.  $x(2 + z)$

4.  $\frac{x+y}{z}$

5.  $5(z - x)$

ONE STEP EQUATIONS – DO NOT USE A CALCULATOR

Solve each equation and check your solution.

1.  $-3x = 15$

2.  $\frac{x}{8} = 0$

3.  $x + 5 = 2$

4.  $x - 7 = -5$

5.  $y - (-9) = 12$

TWO STEP EQUATIONS – DO NOT USE A CALCULATOR

1.  $3x - 5 = 4$

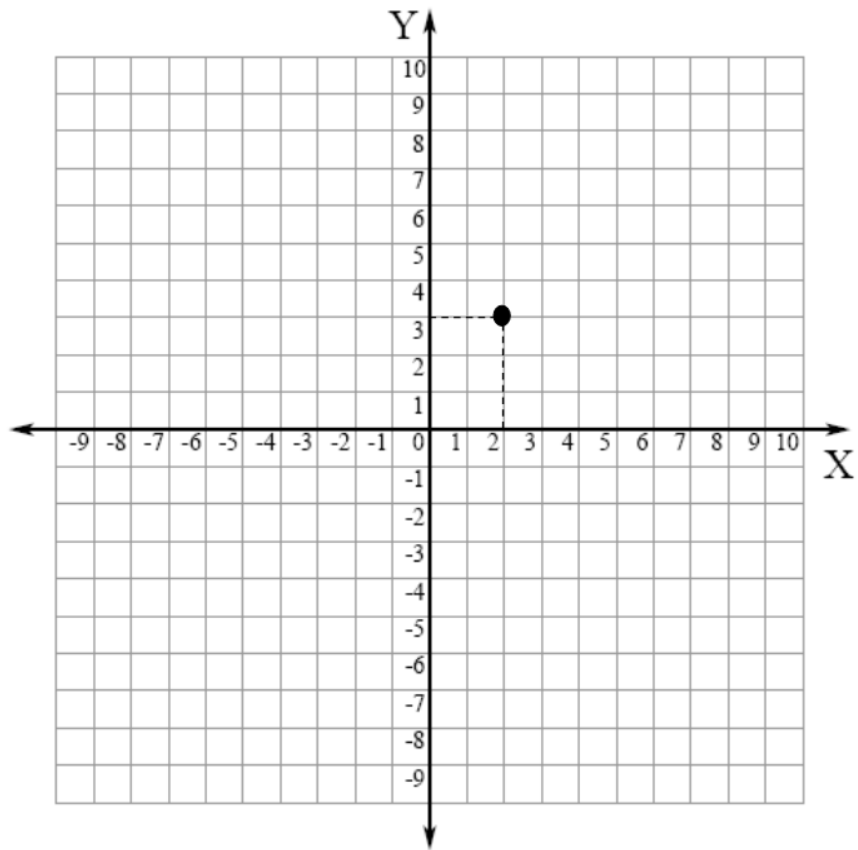
2.  $2(2x + 3) = 6$

3.  $\frac{1}{4}x + 9 = -2$

4.  $5x + 5 = 35$

5.  $3 = 4 + \frac{x}{-3}$

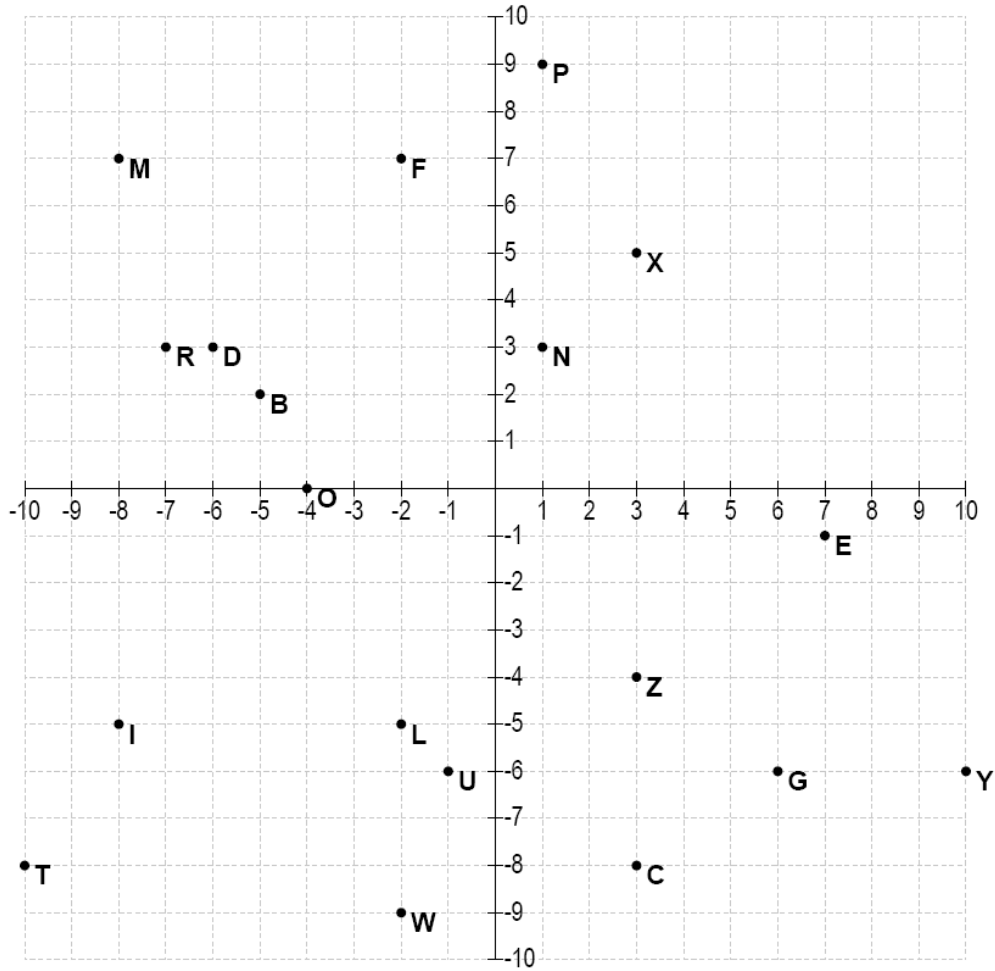
## PLOTTING POINTS



Plot each of the points on the graph and label with the letter given

- |                           |                           |                           |
|---------------------------|---------------------------|---------------------------|
| ( 1 ) Point D at (0, 10)  | ( 5 ) Point E at (-4, -8) | ( 9 ) Point P at (9, -10) |
| ( 2 ) Point J at (-1, 6)  | ( 6 ) Point F at (5, 6)   | (10) Point G at (-7, 9)   |
| ( 3 ) Point O at (-8, 1)  | ( 7 ) Point S at (-8, 2)  | (11) Point Z at (7, -5)   |
| ( 4 ) Point B at (-9, -3) | ( 8 ) Point H at (6, 8)   | (12) Point Y at (0, -8)   |

## PLOTTING POINTS



**Write the coordinates of each point:**

- |              |              |              |              |
|--------------|--------------|--------------|--------------|
| 1 ) Point L: | 6 ) Point F: | 11) Point N: | 16) Point O: |
| _____        | _____        | _____        | _____        |
| 2 ) Point U: | 7 ) Point X: | 12) Point D: | 17) Point W: |
| _____        | _____        | _____        | _____        |
| 3 ) Point B: | 8 ) Point I: | 13) Point Y: | 18) Point T: |
| _____        | _____        | _____        | _____        |
| 4 ) Point P: | 9 ) Point G: | 14) Point R: |              |
| _____        | _____        | _____        |              |
| 5 ) Point C: | 10) Point M: | 15) Point E: |              |
| _____        | _____        | _____        |              |

## ROUNDING DECIMALS

Round to the nearest tenth.

1.  $-8.54$  \_\_\_\_\_

2.  $310.286$  \_\_\_\_\_

3.  $90.79$  \_\_\_\_\_

Round to the nearest hundredth.

4.  $4.826$  \_\_\_\_\_

5.  $723.543$  \_\_\_\_\_

6.  $-6.0127$  \_\_\_\_\_

Round to the nearest whole number.

7.  $4.012$  \_\_\_\_\_

8.  $95.81$  \_\_\_\_\_

9.  $70.59$  \_\_\_\_\_



# Reading Log Directions



Summer is approximately 12 weeks long. You should be reading every day and as much as possible. Your reading log is 6 pages in this packet. I expect one page to be filled out every 2 weeks. The questions I am asking you are thoughtful and higher level. Please think about your answers and write with as many details from your book as possible. All 6 pages of this log should be filled out by the first day of school.

You may use the novel Refugee for your log, however, that book will not take 12 weeks to complete. I expect you to read additional books as well.





**PLOT/TOPIC TRACKER AND REVIEWER'S NOTES**

Please complete one entry for each reading check-in. An entry is likely to be about multiple chapters of your book.

Questions for Reviewer's Notes (choose one question per entry to respond to)

- *The most interesting/funniest/scariest scene was ... because ...*
- *A connection between this part of the book and what we are studying at school is ... which helps me understand that ...*
- *This part of the book reminds me of (other text, movie) because ... which helps me understand that ...*
- *A character I identify with/ don't understand is ... because ...*
- *Something I learned about the world by reading this book is ... which seems important because ...*

Title and pages this entry refers to	Plot/Topic Tracker <i>Briefly explain</i> <ul style="list-style-type: none"> <li>• <i>What happened in the book (fiction)</i></li> <li>• <i>What topic/information is discussed (informational text)</i></li> </ul>	Reviewer's Notes <i>Use one of the questions above</i>
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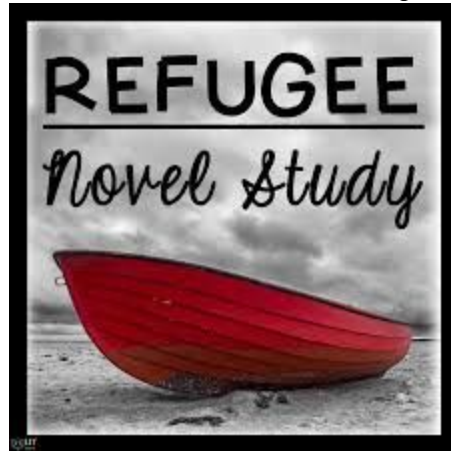
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# Refugee by Alan Gatz

## Novel Study



The book selected for the summer is called, *Refugee*. This is the perfect book to read after studying about hardships, perseverance, and survival throughout the school year through the PATHS curriculum. You will make many connections while reading this novel that I hope leave you with curiosity and questions.

Please complete the activities as you read the book. I have paced the book for you so you don't fall behind. Please write and think at your highest level.

At the end of the novel, you will complete the Refugee Playlist Project. I think you will really enjoy this project and this book! Please bring the reading activities and your Playlist Project on the first day of school.

Have fun and enjoy!  
:]



# Refugee

BY: ALAN GRATZ

Name: \_\_\_\_\_

Before reading *Refugee*, you will need to do some research on the historical periods in which the stories take place. This novel contains three different story lines that occur in three different settings and time periods. Use the graphic organizer below to help with your research.

<b>THE HOLOCAUST</b> 1933-1945	<b>CUBA RIOTS</b> 1994	<b>SYRIAN WAR</b> 2015
<p><b>WHO:</b> Who was being affected during this time?</p> <p><b>WHAT:</b> What was happening?</p> <p><b>WHERE:</b> Where did this take place?</p> <p><b>WHY:</b> Why did this happen?</p> <p>Is this event still affecting people today? If so, how?</p>	<p><b>WHO:</b> Who was being affected during this time?</p> <p><b>WHAT:</b> What was happening?</p> <p><b>WHERE:</b> Where did this take place?</p> <p><b>WHY:</b> Why did this happen?</p> <p>Is this event still affecting people today? If so, how?</p>	<p><b>WHO:</b> Who was being affected during this time?</p> <p><b>WHAT:</b> What was happening?</p> <p><b>WHERE:</b> Where did this take place?</p> <p><b>WHY:</b> Why did this happen?</p> <p>Is this event still affecting people today? If so, how?</p>

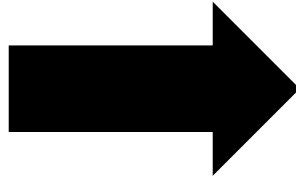
# Refugee BY: ALAN GRATZ

Pages 1-33

AFTER READING PAGES 1-35, LIST THREE EFFECTS FOR JOSEF, ISABEL, AND MAHMOUD'S STORIES BASED ON THE CAUSE GIVEN.

*Josef*

CAUSE: JEWS ARE FORBIDDEN TO PRACTICE LAW UNDER THE CIVIL RESTORATION ACT OF 1933.

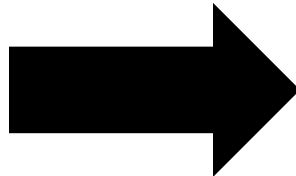


EFFECTS

- 1.
- 2.
- 3.

*Isabel*

CAUSE: IN 1989, THE SOVIET UNION FELL.

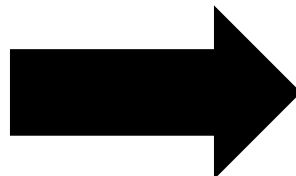


EFFECTS

- 1.
- 2.
- 3.

*Mahmoud*

CAUSE: ASSAD TURNED HIS TANKS AND SOLDIERS AND BOMBERS ON HIS OWN PEOPLE.



EFFECTS

- 1.
- 2.
- 3.

IN THE BOXES BELOW, ILLUSTRATE ONE SCENE FOR EACH CHARACTER'S STORY. BE SURE TO LIST THE PAGE NUMBER WHERE THAT PART OF THE STORY TAKES PLACE.

*Josef*

THE QUOTE I AM SKETCHING FROM THE TEXT IS ON PAGE \_\_\_\_\_.

*Isabel*

THE QUOTE I AM SKETCHING FROM THE TEXT IS ON PAGE \_\_\_\_\_.

*Mahmoud*

THE QUOTE I AM SKETCHING FROM THE TEXT IS ON PAGE \_\_\_\_\_.

# Refugee BY: ALAN GRATZ

Pages 66-109

THINK ABOUT THE THREE MAIN CHARACTERS IN THIS NOVEL AND WHAT YOU KNOW ABOUT THEM SO FAR. FILL OUT THE CHARACTER CHARTS BELOW,

## Josef

TRAIT:

EVIDENCE:

CHARACTER DESCRIPTION:

TRAIT:

EVIDENCE:

## Isabel

TRAIT:

EVIDENCE:

CHARACTER DESCRIPTION:

TRAIT:

EVIDENCE:

## Mahmoud

TRAIT:

EVIDENCE:

CHARACTER DESCRIPTION:

TRAIT:

EVIDENCE:

# Refugee BY: ALAN GRATZ

Pages 110-146

AS YOU READ THESE PAGES, LOOK FOR QUOTES FROM EACH CHARACTER'S STORY THAT STAND OUT TO YOU. IT MIGHT BE SOMETHING CONFUSING, SURPRISING, DESCRIPTIVE, OR SOMETHING THAT REVEALS A CHARACTER'S PERSONALITY OR CONTRIBUTES TO THE PLOT.

*Josef*

QUOTE:

EXPLANATION:

PAGE #:

*Isabel*

QUOTE:

EXPLANATION:

PAGE #:

*Mahmoud*

QUOTE:

EXPLANATION:

PAGE #:

# Refugee BY: ALAN GRATZ

Pages 147-182

AS YOU READ THESE PAGES, LOOK FOR UNKNOWN OR CONFUSING WORDS. LIST THEM BELOW AND USE CONTEXT CLUES TO MAKE A GUESS AT WHAT THE WORD MEANS. THEN LOOK UP THE ACTUAL DICTIONARY DEFINITION.

## Josef

WORD:	BEST GUESS:	DICTIONARY DEFINITION:
WORD:	BEST GUESS:	DICTIONARY DEFINITION:

## Isabel

WORD:	BEST GUESS:	DICTIONARY DEFINITION:
WORD:	BEST GUESS:	DICTIONARY DEFINITION:

## Mahmoud

WORD:	BEST GUESS:	DICTIONARY DEFINITION:
WORD:	BEST GUESS:	DICTIONARY DEFINITION:

# Refugee BY: ALAN GRATZ

Pages 183-235

THINK ABOUT EACH CHARACTER'S STORY. FILL IN THE TIMELINE BELOW WITH THE MOST IMPORTANT EVENTS FROM EACH STORYLINE IN THE ORDER THAT IT HAPPENED.

*Josef*

A horizontal timeline for the character Josef. It consists of a solid black horizontal line with six vertical tick marks extending downwards from the line. The tick marks are positioned at approximately 10%, 20%, 40%, 60%, 80%, and 90% of the line's length.

*Isabel*

A horizontal timeline for the character Isabel. It consists of a solid black horizontal line with six vertical tick marks extending downwards from the line. The tick marks are positioned at approximately 10%, 20%, 40%, 60%, 80%, and 90% of the line's length.

*Mahmoud*

A horizontal timeline for the character Mahmoud. It consists of a solid black horizontal line with six vertical tick marks extending downwards from the line. The tick marks are positioned at approximately 10%, 20%, 40%, 60%, 80%, and 90% of the line's length.

# Refugee BY: ALAN GRATZ

Pages 263-284

RECORD EACH CHARACTER'S CONFLICT BELOW. WHEN YOU FINISH THE BOOK, RETURN TO THIS PAGE AND ADD THE RESOLUTION TO EACH CONFLICT.

*Josef*

*Isabel*

*Mahmoud*

WHAT IS THE CONFLICT?

WHAT IS THE CONFLICT?

WHAT IS THE CONFLICT?

EVIDENCE FROM THE  
TEXT:

EVIDENCE FROM THE  
TEXT:

EVIDENCE FROM THE  
TEXT:

EXPLANATION:

EXPLANATION:

EXPLANATION:

RESOLUTION:

RESOLUTION:

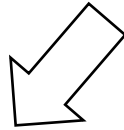
RESOLUTION:



WHAT CAN SOMEONE LEARN FROM READING THIS NOVEL? FILL IN THE THEME BELOW AND PROVIDE EVIDENCE FROM THE TEXT TO SUPPORT THE THEME.

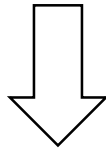
WHAT IS THE THEME?

EVIDENCE FROM THE TEXT



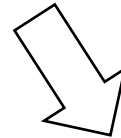
*Josef*

--



*Isabel*

--



*Mahmoud*

--

# Refugee BY: ALAN GRATZ

## Author's Note

The author's note gives us an inside look into how the author, Alan Gratz, developed this story. Many aspects of this historical fiction novel are based on true events. Fill in the t-charts below listing the similarities and differences between the fictional story and true events.

### Josef

SIMILARITIES	DIFFERENCES
<ul style="list-style-type: none"><li>.</li><li>.</li><li>.</li><li>.</li></ul>	<ul style="list-style-type: none"><li>.</li><li>.</li><li>.</li><li>.</li></ul>

### Isabel

SIMILARITIES	DIFFERENCES
<ul style="list-style-type: none"><li>.</li><li>.</li><li>.</li><li>.</li></ul>	<ul style="list-style-type: none"><li>.</li><li>.</li><li>.</li><li>.</li></ul>

### Mahmoud

SIMILARITIES	DIFFERENCES
<ul style="list-style-type: none"><li>.</li><li>.</li><li>.</li><li>.</li></ul>	<ul style="list-style-type: none"><li>.</li><li>.</li><li>.</li><li>.</li></ul>

## ***Refugee* Book Soundtrack Project**

You will create a soundtrack for the novel you have read this summer, *Refugee*. Like music that you hear when you watch a movie, your soundtrack will have songs that relate to significant elements to the plot in this novel.

### Directions

1. You will need to pick **five different songs**, one pertaining to each of the following:
  - a. The main character
  - b. The relationship between the main character and one other character.
  - c. The prominent theme in the novel.
  - d. A specific conflict that one of the main characters face. (internal or external)
  - e. The setting of the novel in general or at a specific point.
2. Once you have selected your songs, you must write a short paragraph as to why you chose that song **and** how it relates to your novel. Each response/explanation needs to be clearly labeled as to which of the five elements it is covering (a-e above). **(Please make sure your music choices are school appropriate/clean version.)**
3. Your work should be typed in Google docs or handwritten on notebook paper. You may include pictures and or links to songs or videos on YouTube. Please make sure that you cite the songs and artist of each song.
4. Have fun and use your imagination and creativity. You will bring this document on the first day of school with the rest of your packet.



# Rubric

<b>Songs</b>	The songs selected clearly connect to each of the five categories. The songs are appropriate for school. Songs and artists are cited	
<b>Novel Connection</b>	Songs have been connected to the novel and evidence has been provided to support each song.	
<b>Written Responses</b>	The written responses are insightful and ideas are well developed and contain evidence from the novel. There are no errors in grammar, spelling, capitalization or punctuation.	
<b>Creativity</b>	Project is handed in on time and formatted in a way that is easy to understand and pleasing to the eye. Student used color, font as well as other features to enhance their project.	
<b>Total</b>		

# Enrichment Packet

Science, Social Studies



The following pages reviews various skills acquired during the school year in science and social studies class. Please bring these completed pages to your homeroom teacher on the first day of school.

## Scientific Method Practice

**Directions:** Read the text below. Then match each statement with the number of the correct step in the scientific method.

The scientific method is a set of steps that scientists use in order to learn more about something. By following the scientific method, scientists can gather information, perform experiments, and discover new things about our world. The scientific method follows this general pattern:

- 1. identify a problem or question**
- 2. research information about the problem or question**
- 3. generate a hypothesis about the problem or question**
- 4. design and perform an experiment**
- 5. gather and analyze observations from the experiment**
- 6. draw conclusions that are supported by your experiment**

\_\_\_\_\_ Elissa hypothesizes that crickets make more noise on hot nights than on cool nights.

\_\_\_\_\_ Elissa counts the number of chirps made by two groups of crickets. One group of crickets is in a cool cage and one group is in a warm cage. There are five crickets in each cage and she counts for 30 minutes.

\_\_\_\_\_ Elissa goes to the library to read information in an encyclopedia about the habits of crickets.

\_\_\_\_\_ Elissa wonders what causes crickets to make more noise some night than others

\_\_\_\_\_ Elissa makes a chart of the number of chirps made by the two groups of crickets and compares the findings.

\_\_\_\_\_ Elissa concludes that crickets chirp more often on hot nights than on cool nights.

Name two ways Elissa controlled her experiment. (What did she keep the same?)

---

---

What was Elissa's variable?

---

---

# Analyzing Data



1. An experiment studies the effects of an experimental drug on the number of offspring a mother mouse has. 10 female mice are given the drug and then impregnated. The number of mice in their litters is compared to the litters of mice that did not take the drug.

Number of Babies in Litter										
Group A (drug)	5	6	4	8	5	2	7	12	12	8
Group B (control)	4	4	6	6	5	6	4	7	5	3

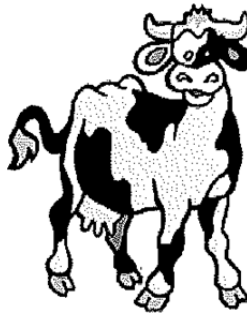
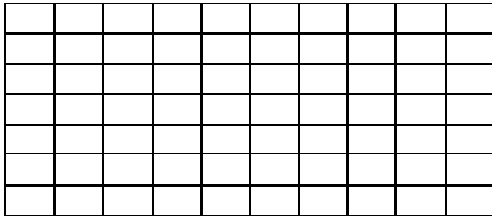
Based on the data, what would you conclude about the drug, did it work?

## 2. Cow Growth Rates

A type of feed claims to boost the growth rate of cows. The feed is tested on two twin newborn cows. Bessie receives the experimental feed, and Bertha receives regular corn feed. Their weights are recorded below.

Month	April	May	June	July	Aug
Bessie	150 lbs	210 lbs	260 lbs	320 lbs	400 lbs
Bertha	150 lbs	250 lbs	290 lbs	340 lbs	400 lbs

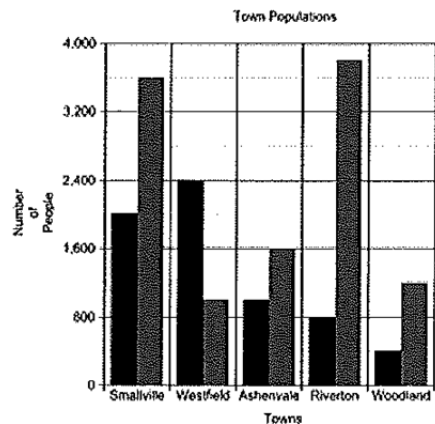
Graph the data; use a dotted line for Bessie and a straight line for Bertha. Make sure you label the X and Y axis.



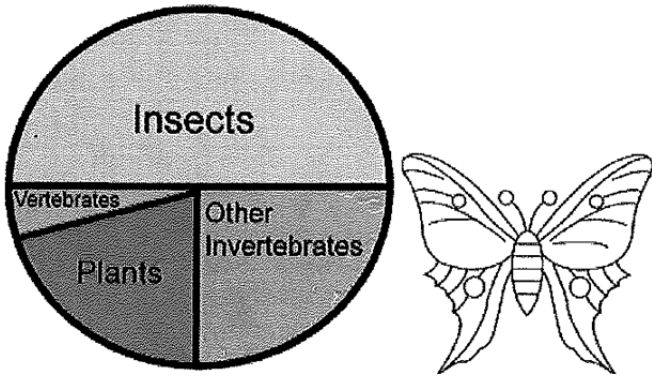
Both cows ended at the same weight, but did the experimental feed change the way they gained weight at all? Describe your conclusions about the experimental feed and explain why it is important that the experiment used twin cows?

## 3. Town Populations Graph

- According to the graph, which town grew the fastest?
- Which town declined in population?
- Which town had the smallest change in population?
- What is the population of Woodland in 2000?



#### 4. Insect Graph

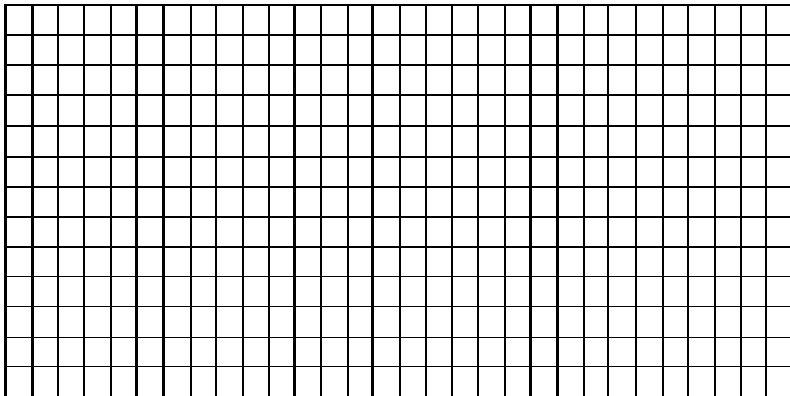


- According to the graph, which group of organisms has the most number of species?
- What is the total percentage for all invertebrates?
- Approximately what percentage are vertebrates?

#### 5. Tiger Shark Population

The population of tiger sharks off the coast of Florida was recorded over several months. Graph the tiger shark populations below.

January - 12	May-34	September-72
February - 15	June-44	October-85
March -25	July-49	November-98
April- 35	August- 55	December- 105



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The number of nurse sharks was also recorded for this time period; though the person recorded the number was not as reliable as the person recording tiger shark numbers. The following data was taken on nurse sharks. Use a different color to graph the nurse shark population on the graph above.

March- 60 | April- 52 | July- 38 | August- 20 | November- 14 |  
December- 11

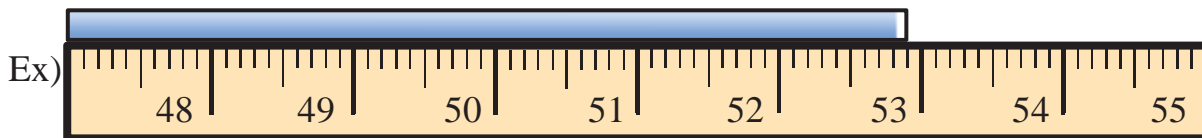
- At what month would you expect the number of nurse sharks to equal the number of tiger sharks?
- What does the graph tell you about the trends both shark populations?



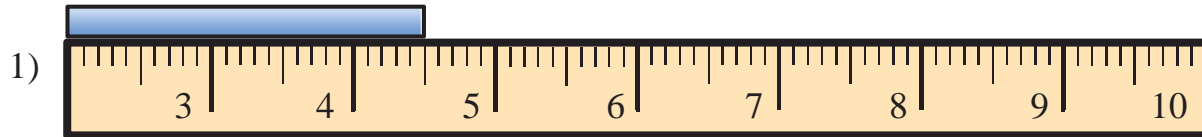


Determine the length of the bar above the ruler. Write your answer in centimeters.

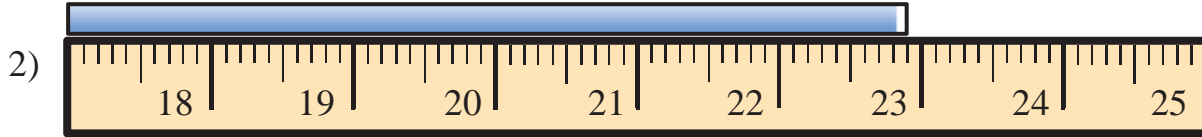
Answers



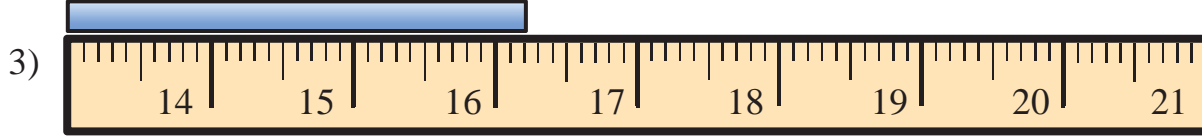
Ex. **52.9 cm**



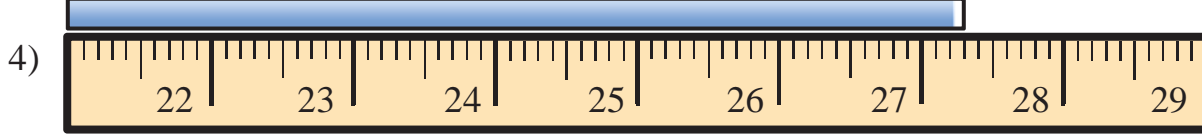
1. \_\_\_\_\_



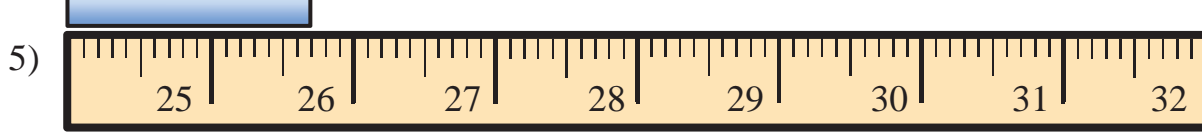
2. \_\_\_\_\_



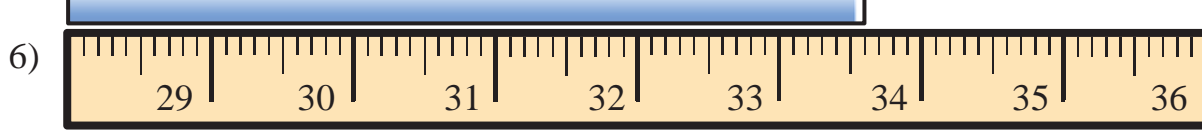
3. \_\_\_\_\_



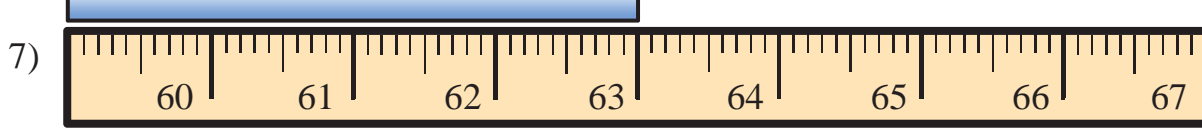
4. \_\_\_\_\_



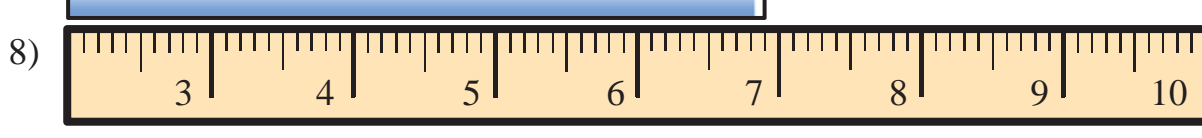
5. \_\_\_\_\_



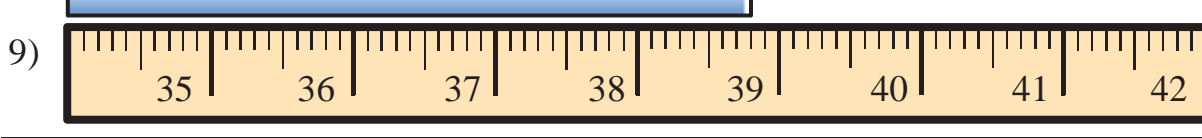
6. \_\_\_\_\_



7. \_\_\_\_\_



8. \_\_\_\_\_



9. \_\_\_\_\_



## UNDERSTANDING METRICS

In the United States, people usually use English units of measurement such as ounces, pounds, inches and feet. Most other countries use metric units. Metric units include the gram, kilogram, meter and centimeter. Scientists also use the metric system. In science, you will use mostly metric units.

The metric system is based upon units of ten. Each unit is ten times smaller or larger than the next unit. This means that a unit is made larger by multiplying it by 10 and made smaller by dividing by 10. Prefixes describe a unit's value. The prefixes and their meanings are listed below.

Prefix	Meaning	
kilo	On thousand (1,000)	Each, larger by a multiple of 10
hecto	One hundred (100)	
deca	Ten (10)	
deci	One tenth (1/10)	Each, smaller by a multiple of 1/10
centi	One hundredth (1/100)	
milli	One thousandth (1/1000)	

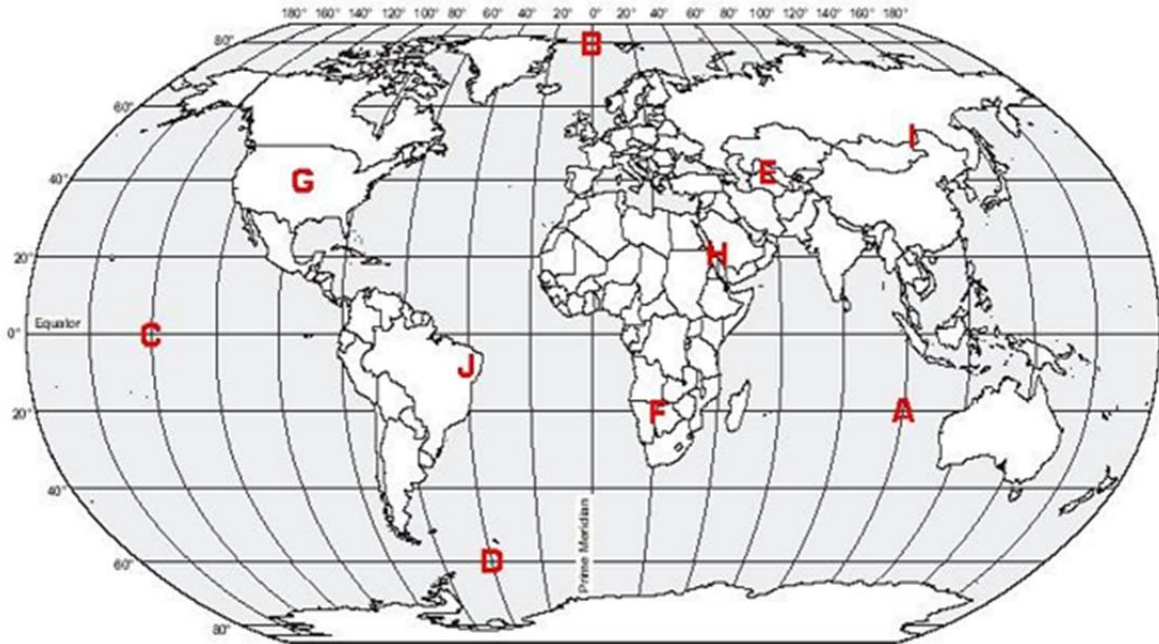
Use the chart above to answer the following questions.

- To change from tens to hundreds, you multiply by \_\_\_\_\_  
1, 10, 100
- To change from hundreds to thousands, you multiply by \_\_\_\_\_  
1, 10, 100
- In the metric system, to change from one unit to the next higher unit, what must you do?  
\_\_\_\_\_
- To change from one unit to the next lower unit, you must divide by \_\_\_\_\_  
1, 10, 100
- Which prefix stands for a greater value?
  - deca- or kilo- ? \_\_\_\_\_
  - kilo- or milli- ? \_\_\_\_\_
  - centi- or milli-? \_\_\_\_\_
  - hecto- or kilo-? \_\_\_\_\_
  - centi- or deci-? \_\_\_\_\_
  - deca- or deci-? \_\_\_\_\_

## Metric Conversion

- 3 cm = \_\_\_\_\_ mm
- 2.84 hm = \_\_\_\_\_ dam
- 14 dm = \_\_\_\_\_ mm
- 9 mm = \_\_\_\_\_ km
- 56 hm = \_\_\_\_\_ cm
- 107.6 km = \_\_\_\_\_ dm
- 0.919 m = \_\_\_\_\_ mm
- 67 cg = \_\_\_\_\_ mg
- 2 mg = \_\_\_\_\_ cg
- 7.4 dag = \_\_\_\_\_ g
- 0.210 kg = \_\_\_\_\_ hg
- 5 g = \_\_\_\_\_ kg
- 19.12 dg = \_\_\_\_\_ dag
- 116 hg = \_\_\_\_\_ dg
- 7 kL = \_\_\_\_\_ L
- 3.6 cL = \_\_\_\_\_ hL
- 15 L = \_\_\_\_\_ mL
- 8.41 mL = \_\_\_\_\_ cL
- 740 dL = \_\_\_\_\_ kL
- 24.005 hL = \_\_\_\_\_ daL

## Latitude and Longitude Practice



An airplane crashes at 40 degrees north and 60 degrees east. Which letter would you travel to if you were looking for survivors?

What continent would you be on at 10 degrees south and 70 degrees west?

0 degrees latitude, 0 degrees longitude, the intersection of the Equator and the Prime Meridian, would be located in which ocean?

You receive a radio SOS call that a boat is sinking at 20 degrees south and 100 degrees east. What ocean would you travel to try to rescue the people?

Which letter is located at 50 degrees north and 120 degrees east?

Fill in the corresponding coordinates below.

Letter	Latitude	Longitude
A		
B		
C		
D		
E		
F		
G		
H		
I		

- Choices**
- 20 N, 40 E
  - 0 N, 140 W
  - 20 S, 100 E
  - 40 N, 60 E
  - 20 S, 20 E
  - 80 N, 0 E
  - 60 S, 40 W
  - 40 N, 100 W
  - 50 N, 120 E