

# Franklin Elementary School

## 6<sup>th</sup> Grade Summer Math Practice

(Remember to show all of your work on a separate sheet(s).)

Write all answers on the attached Answer Sheet, and submit all papers to your math teacher on your first day of 6<sup>th</sup> grade.

**Estimate the quotient.**

1)  $59 \div 5$

2)  $78 \div 8$

3)  $101 \div 4$

4) Your school's science club is making gift baskets to sell. The club has 350

individually wrapped soaps to put into the gift baskets. The club wants to put

3 soaps in each gift basket. About how many gift baskets can the club make?

**Divide.**

5)  $322 \div 14$

6)  $247 \div 19$

7)  $154 \div 22$

**Add or subtract.**

8)  $2.3 + 3.4$

11)  $3 - 2.09$

9)  $5.8 - 2.1$

12)  $42.39 + 3.7$

10)  $4.2 - 1.94$

13)  $756 + 32.8$

**Estimate the sum or difference to the nearest whole number.**

14)  $3.17 - 1.8$

15)  $5.23 + 6.8$

16)  $8.14 - 7.25$

**Complete the statement with  $<$ ,  $>$ , or  $=$ .**

17)  $1.007 \underline{\hspace{1cm}} 1.004$

18)  $3.052 \underline{\hspace{1cm}} 3.055$

19)  $4.61 \underline{\hspace{1cm}} 0.461$

20)  $5.750 \underline{\hspace{1cm}} 5.75$

21)  $7.34 \underline{\hspace{1cm}} 7.734$

22)  $9.976 \underline{\hspace{1cm}} 9.76$

Graph each point on the coordinate plane.

23) A (2, 5)

24) B (6, 1)

25) C (0, 4)



For questions 26 and 27. Find the area of each figure.

26)

4 cm



6 cm

27)



9 in.

11 in.

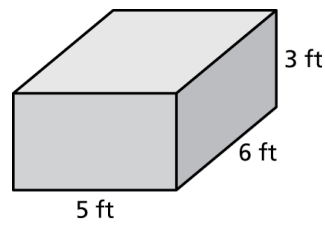
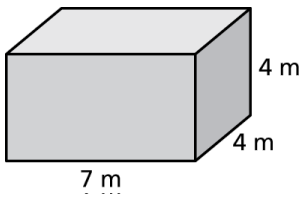
Your house is 1030 meters from school. Your friend's house is 1.5 kilometers from school. Whose house is farther from school?

29) How many vertices does a cube have?

Find the volume of the rectangular prism.

30)

31)



Tell whether the number is *prime* or *composite*.

32) 532

33) 87

34) 41

Multiply or divide.

35)  $16 \times 9$

36)  $20 \times 17$

37)  $135 \div 9$

Simplify the expression.

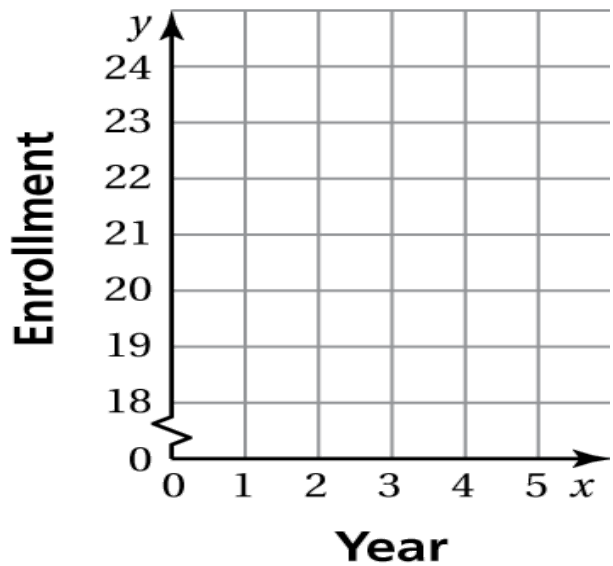
38)  $15 + 5 \times 9$

39)  $2^3 \times (5 - 2)$

40)  $7 \times 5 - 28 \div 4$

41) The data show a class enrollment over a five-year period. Make a line graph to represent the data.

Year	1	2	3	4	5
Class Enrollment	22	24	23	20	19



Use the data set below.

The numbers below are the lengths (in inches) of plants grown in Science class.

**7, 5, 3, 3, 5, 10, 4, 5, 12**

42) Melanie's teacher asked the class to find the average, what is another word for average?

43) Find the average of the plant lengths above.

44) Paul said that the range of the plant lengths is 5. Is he correct? Support your answer with work.

45) Which is greater: the range or the median of the plant lengths?

**Round each number to the indicated place value.**

46) 12.847; hundredths

47) 1.89; tenths

**Evaluate.**

48) Write  $5^3$  in expanded form and then evaluate. \_\_\_\_\_

49) Write  $4 \times 4 \times 4 \times 4 \times 4$  in exponential form and then evaluate. \_\_\_\_\_

**Solve.**

50) Brian says that  $3^2$  is less than  $2^3$ . Is he correct? Show work to support your answer.

# Mathematics Reference Sheet

## Conversions

### U.S. Customary

1 foot = 12 inches  
1 yard = 3 feet  
1 mile = 5280 feet  
1 acre  $\approx$  43,560 square feet  
1 cup = 8 fluid ounces  
1 pint = 2 cups  
1 quart = 2 pints  
1 gallon = 4 quarts  
1 gallon = 231 cubic inches  
1 pound = 16 ounces  
1 ton = 2000 pounds  
1 cubic foot  $\approx$  7.5 gallons

### U.S. Customary to Metric

1 inch = 2.54 centimeters  
1 foot  $\approx$  0.3 meter  
1 mile  $\approx$  1.61 kilometers  
1 quart  $\approx$  0.95 liter  
1 gallon  $\approx$  3.79 liters  
1 cup  $\approx$  237 milliliters  
1 pound  $\approx$  0.45 kilogram  
1 ounce  $\approx$  28.3 grams  
1 gallon  $\approx$  3785 cubic centimeters

### Time

1 minute = 60 seconds  
1 hour = 60 minutes  
1 hour = 3600 seconds  
1 year = 52 weeks

### Temperature

$$C = \frac{5}{9}(F - 32)$$

$$F = \frac{9}{5}C + 32$$

### Metric

1 centimeter = 10 millimeters  
1 meter = 100 centimeters  
1 kilometer = 1000 meters  
1 liter = 1000 milliliters  
1 kiloliter = 1000 liters  
1 milliliter = 1 cubic centimeter  
1 liter = 1000 cubic centimeters  
1 cubic millimeter = 0.001 milliliter  
1 gram = 1000 milligrams  
1 kilogram = 1000 grams

### Metric to U.S. Customary

1 centimeter  $\approx$  0.39 inch  
1 meter  $\approx$  3.28 feet  
1 kilometer  $\approx$  0.62 mile  
1 liter  $\approx$  1.06 quarts  
1 liter  $\approx$  0.26 gallon  
1 kilogram  $\approx$  2.2 pounds  
1 gram  $\approx$  0.035 ounce  
1 cubic meter  $\approx$  264 gallon

## Number Properties

Commutative Properties of Addition and Multiplication

$$a + b = b + a$$

$$a \cdot b = b \cdot a$$

Associative Properties of Addition and Multiplication

$$(a + b) + c = a + (b + c)$$

$$(a \cdot b) \cdot c = a \cdot (b \cdot c)$$

Addition Property of Zero

$$a + 0 = a$$

Multiplication Properties of Zero and One

$$a \cdot 0 = 0$$

$$a \cdot 1 = a$$

Distributive Property:

$$a(b + c) = ab + ac$$

$$a(b - c) = ab - ac$$

## Properties of Equality

Addition Property of Equality

$$\text{If } a = b, \text{ then } a + c = b + c.$$

Subtraction Property of Equality

$$\text{If } a = b, \text{ then } a - c = b - c.$$

Multiplication Property of Equality

$$\text{If } a = b, \text{ then } a \cdot c = b \cdot c.$$

Multiplicative Inverse Property

$$n \cdot \frac{1}{n} = \frac{1}{n} \cdot n = 1, n \neq 0$$

Division Property of Equality

$$\text{If } a = b, \text{ then } a \div c = b \div c, c \neq 0.$$

## Properties of Inequality

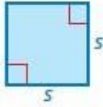
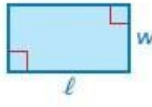
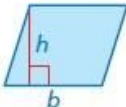
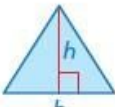
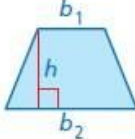
Addition Property of Inequality  
If  $a > b$ , then  $a + c > b + c$ .

Subtraction Property of Inequality  
If  $a > b$ , then  $a - c > b - c$ .

Multiplication Property of Inequality  
If  $a > b$  and  $c$  is positive, then  $a \cdot c > b \cdot c$ .

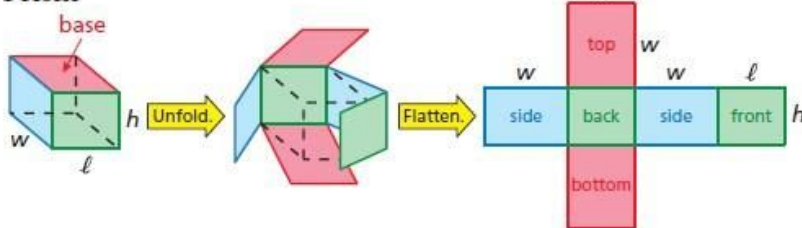
Division Property of Inequality  
If  $a > b$  and  $c$  is positive, then  $a \div c > b \div c$ .

## Perimeter and Area

Square	Rectangle	Parallelogram	Triangle	Trapezoid
				
$P = 4s$ $A = s^2$	$P = 2\ell + 2w$ $A = \ell w$	$A = bh$	$A = \frac{1}{2}bh$	$A = \frac{1}{2}h(b_1 + b_2)$

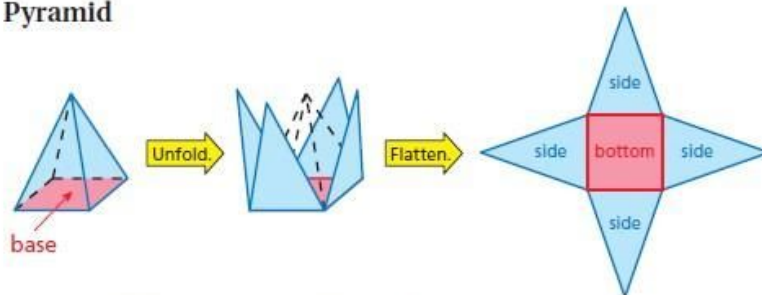
## Surface Area

### Prism



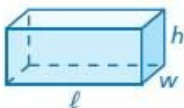
$S = \text{areas of bases} + \text{areas of lateral faces}$

### Pyramid



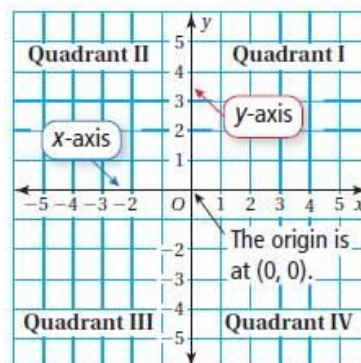
$S = \text{area of base} + \text{areas of lateral faces}$

## Volume of a Rectangular Prism



$$V = Bh = \ell wh$$

## The Coordinate Plane



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

From what school are you're coming? \_\_\_\_\_

What's your 5<sup>th</sup> grade math teacher's name? \_\_\_\_\_

**Estimate the Quotient**

- 1.) \_\_\_\_\_
- 2.) \_\_\_\_\_
- 3.) \_\_\_\_\_
- 4.) \_\_\_\_\_

**Division**

- 5.) \_\_\_\_\_
- 6.) \_\_\_\_\_
- 7.) \_\_\_\_\_

**Add or Subtract**

- 8.) \_\_\_\_\_
- 9.) \_\_\_\_\_
- 10.) \_\_\_\_\_
- 11.) \_\_\_\_\_
- 12.) \_\_\_\_\_
- 13.) \_\_\_\_\_

**Estimate the sum or difference**

- 14.) \_\_\_\_\_
- 15.) \_\_\_\_\_
- 16.) \_\_\_\_\_

**Comparing Values**

- 17.) \_\_\_\_\_
- 18.) \_\_\_\_\_
- 19.) \_\_\_\_\_
- 20.) \_\_\_\_\_

21.) \_\_\_\_\_

22.) \_\_\_\_\_

**Geometry**

Plot the ordered pairs from #s 23,24,25 below.



- 26.) \_\_\_\_\_
- 27.) \_\_\_\_\_
- 28.) \_\_\_\_\_
- 29.) \_\_\_\_\_
- 30.) \_\_\_\_\_
- 31.) \_\_\_\_\_

**Prime or Composite**

- 32.) \_\_\_\_\_
- 33.) \_\_\_\_\_
- 34.) \_\_\_\_\_

**Multiply or Divide**

- 35.) \_\_\_\_\_
- 36.) \_\_\_\_\_
- 37.) \_\_\_\_\_

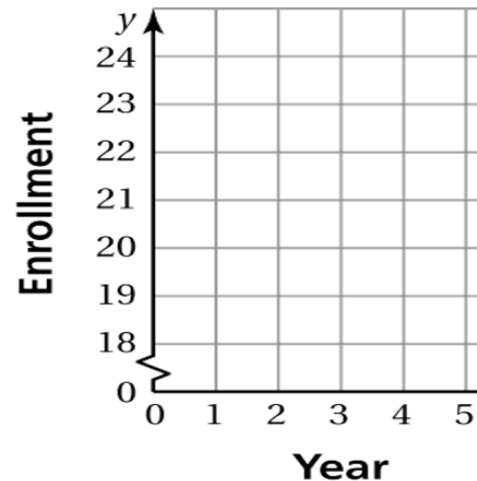
**Simplify the Expressions**

38.) \_\_\_\_\_

39.) \_\_\_\_\_

40.) \_\_\_\_\_

**Create a Line Graph**



41.) \_\_\_\_\_

**Analyzing Data**

- 42.) \_\_\_\_\_
- 43.) \_\_\_\_\_
- 44.) \_\_\_\_\_

45.) \_\_\_\_\_

**Place Value**

46.) \_\_\_\_\_

47.) \_\_\_\_\_

**Powers & Exponents**

48.) \_\_\_\_\_

49.) \_\_\_\_\_

50.) \_\_\_\_\_