Name_____ Date _____

# Franklin Elementary School

## 6th 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 6th grade.**

**Estimate the quotient.**

**1)** 59 ÷ 5

**2)** 78 ÷ 8

**3)** 101 ÷ 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 ÷ 14 **6)** 247 ÷ 19 **7)** 154 ÷ 22

**Add or subtract.**

**8)** 2.3 + 3.4

**9)** 5.8 - 2.1

**10)** 4.2 – 1.94

**11)** 3 – 2.09

**12)** 42.39 + 3.7

**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 ____ 1.004 **18)** 3.052 ____ 3.055 **19)** 4.61 ____ 0.461

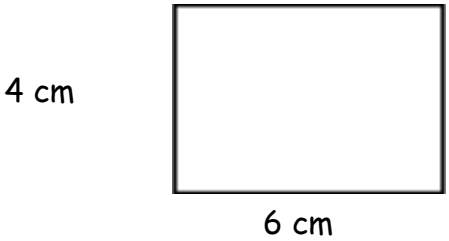
**20)** 5.750 ____ 5.75 **21)** 7.34 ____ 7.734 **22)** 9.976 ____ 9.76

**Graph each point on the coordinate plane.**

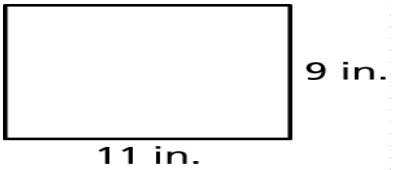
**23)** A (2, 5) **24)** B (6, 1) **25)** C (0, 4)

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

**26)**




**27)**

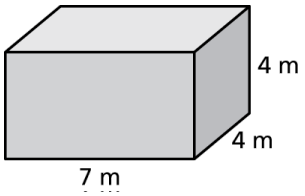


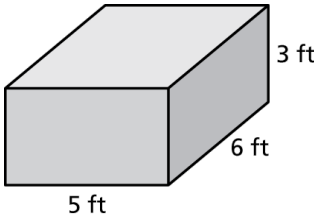

Your house is 1030 meters from school. Your friend's house is 1.5 kilometers from school. Whose house is farther from school?

**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.**

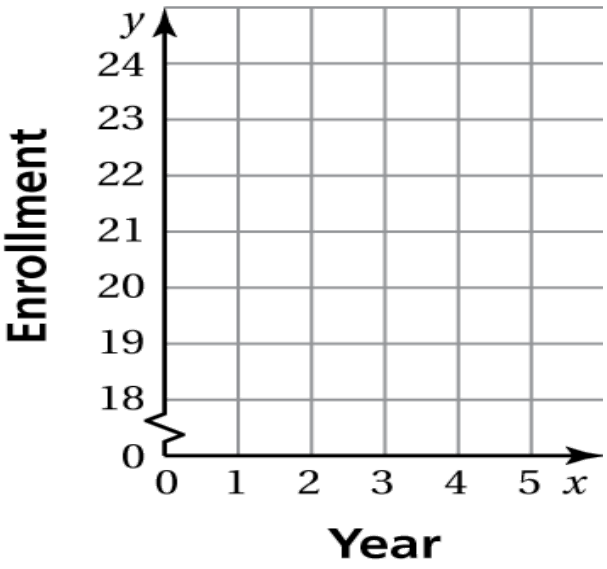
**35)** 16 x 9 **36)** 20 x 17 **37)** 135 ÷ 9

**Simplify the expression.**

**38)** 15 + 5 x 9 **39)** $2^3$ x (5 - 2) **40)** 7 x 5 - 28 ÷ 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 x 4 x 4 x 4 x4 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 ≈ 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 ≈ 7.5 gallons

**U.S. Customary to Metric**
1 inch = 2.54 centimeters
1 foot ≈ 0.3 meter
1 mile ≈ 1.61 kilometers
1 quart ≈ 0.95 liter
1 gallon ≈ 3.79 liters
1 cup ≈ 237 milliliters
1 pound ≈ 0.45 kilogram
1 ounce ≈ 28.3 grams
1 gallon ≈ 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 ≈ 0.39 inch
1 meter ≈ 3.28 feet
1 kilometer ≈ 0.62 mile
1 liter ≈ 1.06 quarts
1 liter ≈ 0.26 gallon
1 kilogram ≈ 2.2 pounds
1 gram ≈ 0.035 ounce
1 cubic meter ≈ 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

If $a = b$, then $a + c = b + c$.

Subtraction Property of Equality

If $a = b$, then $a - c = b - c$.

Multiplication Property of Equality

If $a = b$, 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

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

## Properties of Inequality

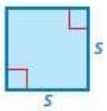
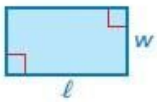
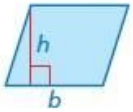
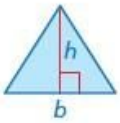
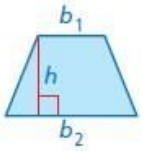
Addition Property of Inequality
If $a > b$, then $a + c > b + c$.

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

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

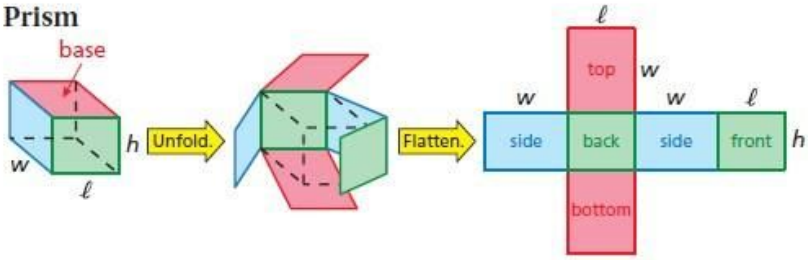
Division Property of Inequality
If $a > b$ and $c$ is positive, then $a \div c > b \div c$.

## Perimeter and Area

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

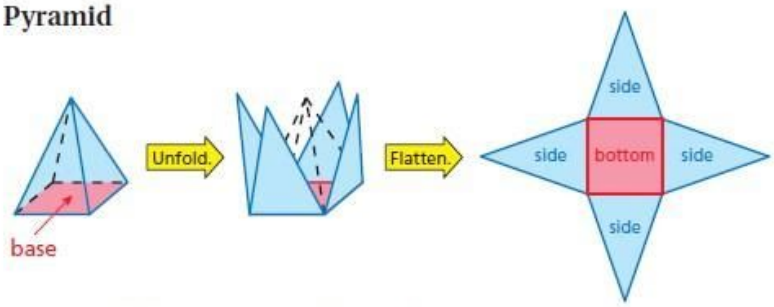
## Surface Area

**Prism**



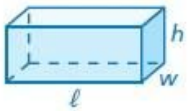

$S$ = areas of bases + areas of lateral faces

**Pyramid**



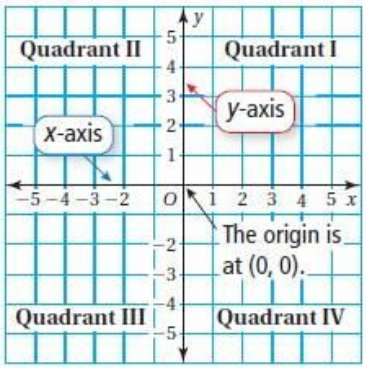

$S$ = area of base + areas of lateral faces

## Volume of a Rectangular Prism




$V = Bh = \ell wh$

## The Coordinate Plane




# Summer Packet Answer Sheet

Name:_____ Date:_____

From what school are you're coming?_____

What's your 5th 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.)_____

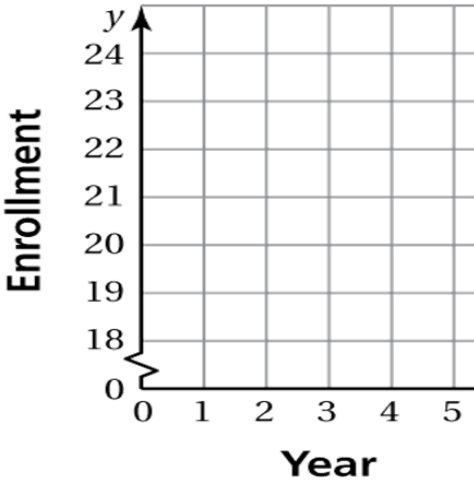
**Simplify the Expressions**

38.)_____

39.)_____

40.)_____

**Create a Line Graph**




41.)

**Analyzing Data**

42.)_____

43.)_____

44.)_____

45.) _____

**Place Value**

46.)_____

47.)_____

**Powers & Exponents**

48.)_____

49.)_____

50.) _____