

Mathematics

CONCEPTS REVIEW



INSTRUCTIONS: Study all sections carefully. Answer questions where applicable.

SECTION 1: Place Value

	Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Units	DECIMAL POINT	Tenths	Hundredths	Thousandths
Number	1000000	100000	10000	1000	100	10	1	•	$\frac{1}{10}$ 0ths	$\frac{1}{100}$ 0ths	$\frac{1}{1000}$ 00ths
753.25					7	5	3	•	2	5	
12345.123			1	2	3	4	5	•	1	2	3
1.232							1	•	2	3	2
3,444,222.1	3	4	4	4	2	2	2	•	1		

POSITION = Place e.g. ones, thousands, tenths, etc.

VALUE = Worth e.g. 300, 7,000, 0.5 etc.

Write the place value **position** of the underlined digit.

1. 6,789 _____
2. 56.34 _____
3. 73,672.134 _____
4. 342,985.6 _____

Write the **value** of the underlined digit.

1. 679 _____
2. 57,382 _____
3. 362,892 _____
4. 78.93 _____

SECTION 2: Number Forms

STANDARD FORM	WORD FORM	EXPANDED FORM
463	four hundred sixty-three	$400 + 60 + 3$
78,906	seventy-eight thousand nine hundred six	$70,000 + 8,000 + 900 + 6$
0.67	sixty-seven hundredths	$0.6 + 0.07$
354.27	Three hundred fifty-four and twenty-seven hundredths	$300 + 50 + 4 + 0.2 + 0.07$
2,679,321	Two million, six hundred seventy-nine thousand, three hundred twenty-one	$2,000,000 + 600,000 + 70,000 + 9,000 + 300 + 20 + 1$

Write the following numbers in **STANDARD FORM**

1. $300 + 20 + 9$ _____
2. Sixty-two and thirty-nine hundredths _____
3. Eight hundred thirty-six thousand, four hundred fifty-six _____

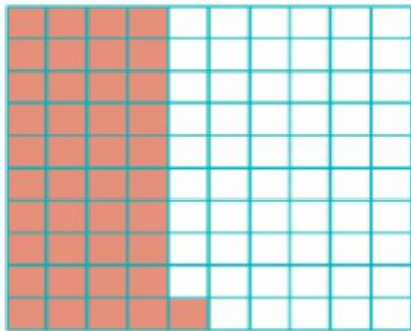
Write the following numbers in **EXPANDED FORM**.

1. 69,534 _____
2. Nine thousand, seven hundred eighty-seven _____
3. 89.76 _____

Write the following numbers in **WORD FORM**.

1. 35,761 _____
2. 67.215 _____
3. $600 + 50 + 3$ _____

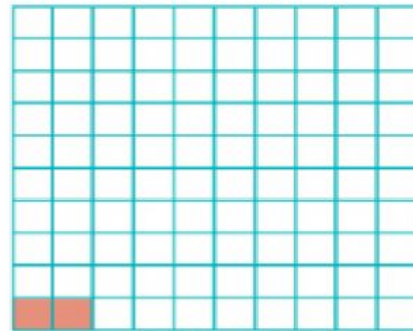
SECTION 3: *Decimals Forms*



Fraction: $\frac{41}{100}$

Word Form: **forty-one hundredths**

Decimal Form: **0.41**

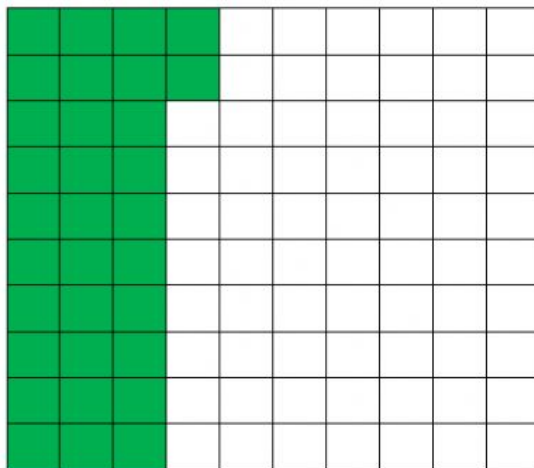


Fraction: $\frac{02}{100}$

Word Form: **two hundredths**

Decimal Form: **0.02**

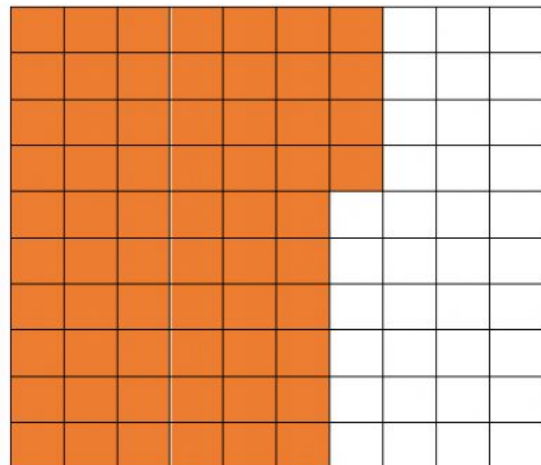
Complete:



Fraction: _____

Word Form: _____

Decimal Form: _____



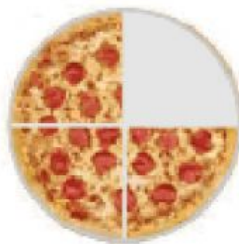
Fraction: _____

Word Form: _____

Decimal Form: _____

SECTION 4: *Fractions*

A fraction is part of a whole.

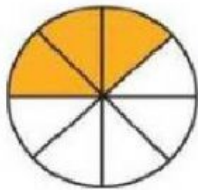


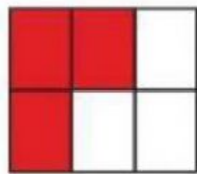
$\frac{3}{4}$

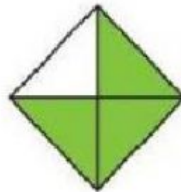
← Numerator

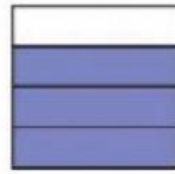
← Denominator

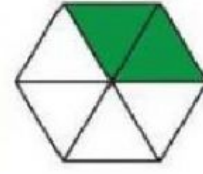
Find the fraction of the **shaded** parts.



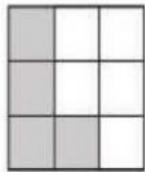




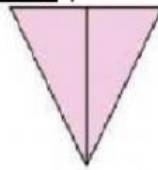


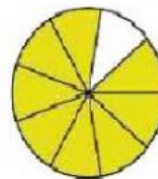


Find the fraction of the **unshaded** parts.









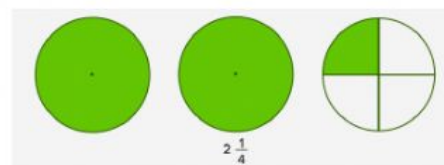
Mixed Numbers

A mixed number is a number that consists of a whole number and a proper fraction.

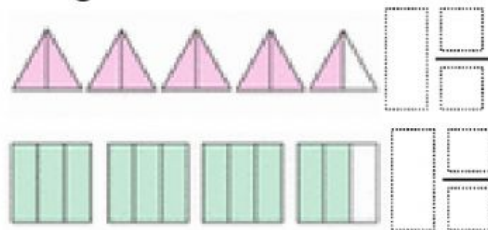
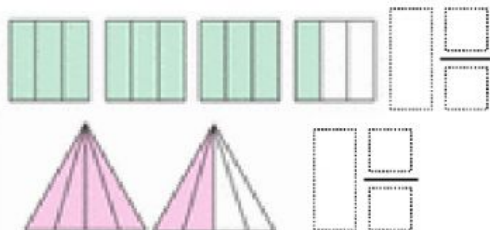
$2\frac{1}{3}$

Whole number

Proper fraction

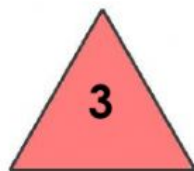


Write a mixed number for the following.



SECTION 5: *Geometry*

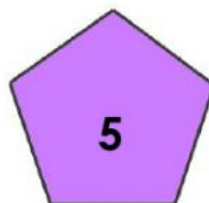
POLYGONS



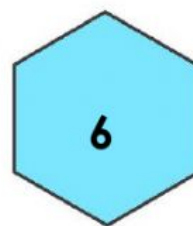
Triangle



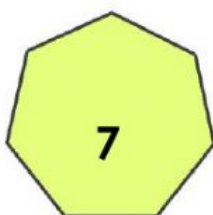
Quadrilateral



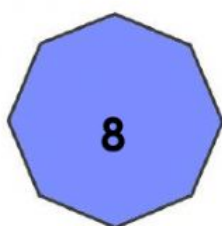
Pentagon



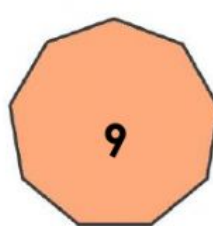
Hexagon



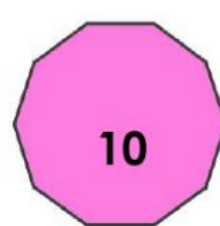
Heptagon



Octagon



Nonagon

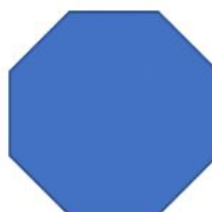


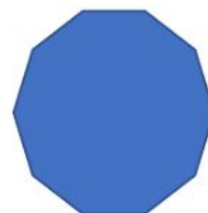
Decagon

Identify the following polygons.









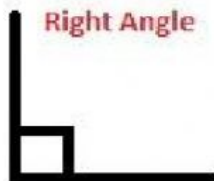
ANGLES

Acute Angle



Less than 90°

Right Angle



Exactly 90°

Obtuse Angle



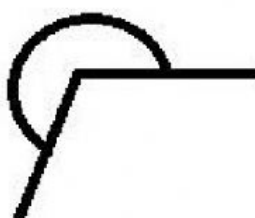
Greater than 90° but
less than 180°

Straight Angle



Exactly 180°

Reflex Angle



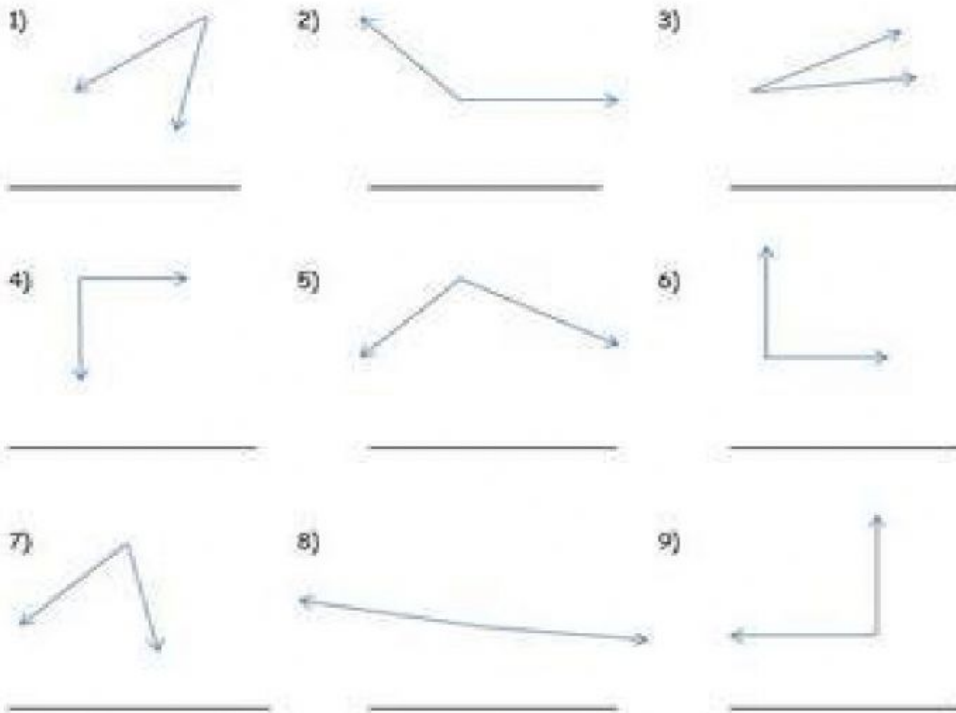
Greater than 180°

Full Rotation



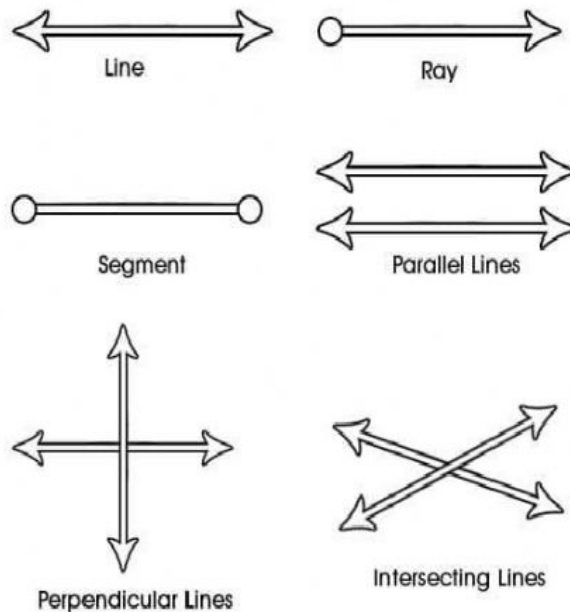
Exactly 360°

Identify the following angles.

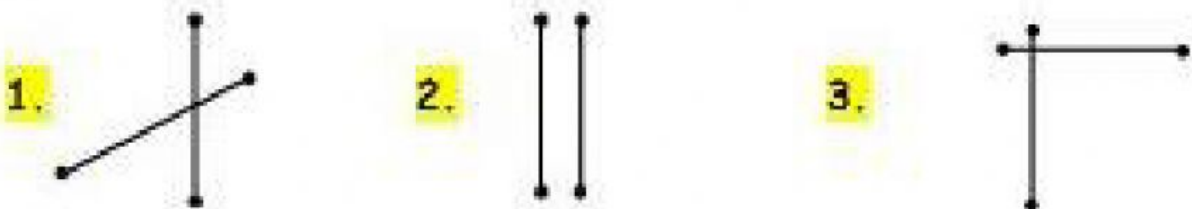


LINES & LINE SEGMENT

Types of lines

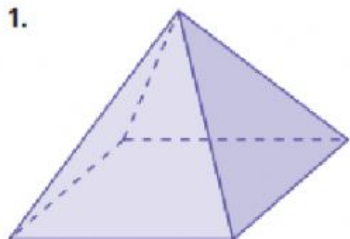


Identify the following lines:



FACES, EDGES & VERTICES

1.

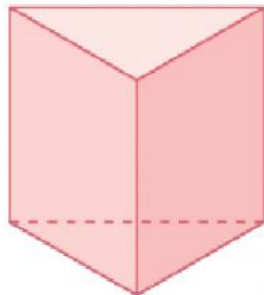


Faces = 5

Edges = 8

Vertices = 5

2.

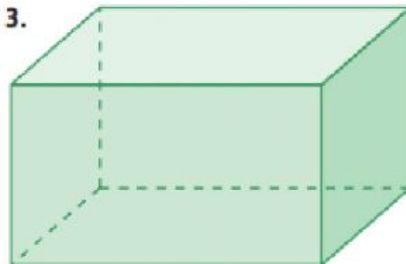


Faces = 5

Edges = 9

Vertices = 6

3.

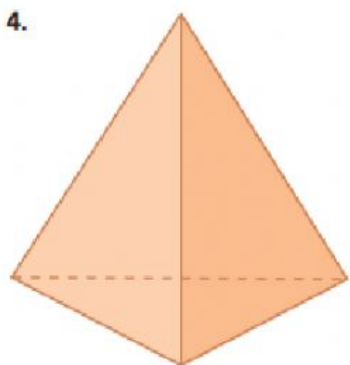


Faces = 6

Edges = 12

Vertices = 8

4.

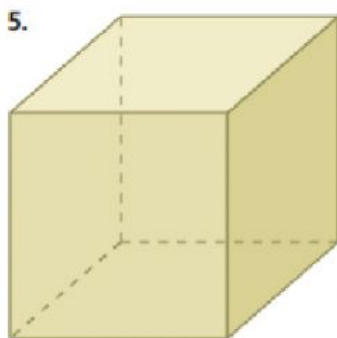


Faces = 4

Edges = 6

Vertices = 4

5.

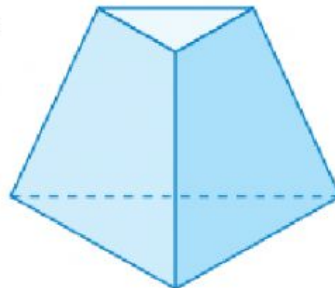


Faces = 6

Edges = 12

Vertices = 8

6.

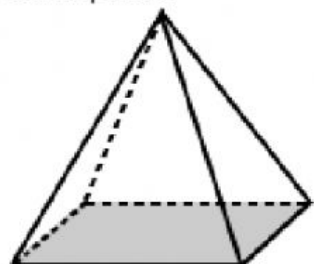


Faces = 5

Edges = 9

Vertices = 6

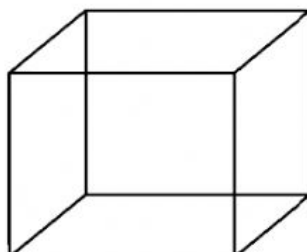
Complete



Faces: ____

Edges: ____

Vertices: ____



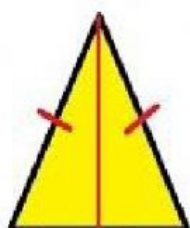
Faces: ____

Edges: ____

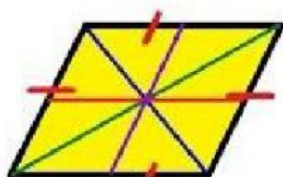
Vertices: ____

LINES OF SYMMETRY

What Are Lines of Symmetry?



1 line of sym



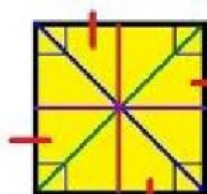
4 lines of sym



5 lines of sym



3 lines of sym



4 lines of sym

SECTION 6: Roman Numerals on a Clock

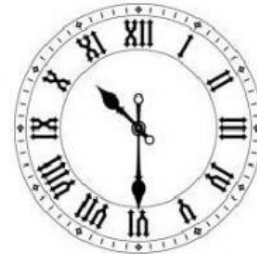
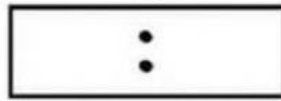
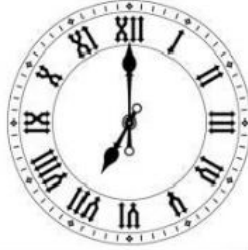
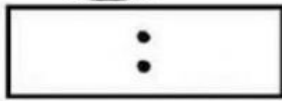
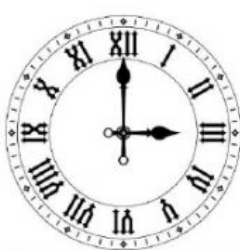
1	I	11	XI	50	L
2	II	12	XII	100	C
3	III	13	XIII	500	D
4	IV	14	XIV	1000	M
5	V	15	XV		
6	VI	16	XVI		
7	VII	17	XVII		
8	VIII	18	XVIII		
9	IX	19	XIX		
10	X	20	XX		

What time is it?
(unfold to check your answer)



1 : 40

REMEMBER: The short hand is the hour, the long hand is the minutes.



SECTION 7: Mass

Finding MASS

How much matter is in an object

units of measurement:

GRAMS: about the weight of a paper clip
1 gram =

KILOGRAMS: about the weight of one book.
1,000 grams = 1 kilogram
1 kilogram =

Tools you can use:

- scale
- triple beam balance
- hanging scale

Multiply by 1,000

$$g = kg \times 1000$$

example:

$$1 \text{ kg} \times 1,000 = 1,000 \text{ g}$$

$$20 \text{ kg} \times 1,000 = 20,000 \text{ g}$$

Divide by 1,000

$$kg = g \div 1000$$

example:

$$1,000 \text{ g} \div 1,000 = 1$$

$$20,000 \text{ g} \div 1,000 = 20$$

Convert the following measurements.

$$3 \text{ kg} = \underline{\hspace{2cm}} \text{ g}$$

$$6,000 \text{ g} = \underline{\hspace{2cm}} \text{ kg}$$

$$50 \text{ kg} = \underline{\hspace{2cm}} \text{ g}$$

$$57,000 \text{ g} = \underline{\hspace{2cm}} \text{ kg}$$

What unit of measurement would you use to measure the following objects? Write **grams** or **kilograms**.

