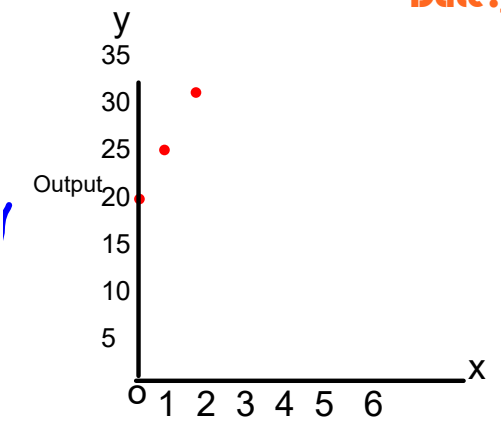
Grade 6 Math

Date: Dec. 14/17

#1



a) Make a table. Record the input and output

b) Find the variable expression for the table.

c) Find out the output if the input is 6

extend the chart with the pattern

a)

Input	Output
0	20
1	25
2	30
3	35
4	40
5	45
6	50

+5 given

Continued Pattern

b) $5n$

Check $n=0$ out = 20

$5n$

$5(0)$

0 must add 20 to get output when $n=0$

Variable Expression

Answer to part "b" → $5n + 20$

c) Method 2 $n = 6$ out = ?

$5n + 20$

$5(6) + 20$

$30 + 20$

50

When input is 6 then output is 50.

#2 Here is a table of values. a) Determine the missing number

b) Determine the variable expression (2 machines)

In Out

X	Y
0	17
1	19
2	21
3	23
4	25
5	? 27

+2 +2

$2n$

$2(0)$

0

$+17$ = to get

$n=0$ out=17

$2n+17$

#3 Write the numerical expression for

a) Kim goes to the store and buys 5 newspapers that are \$3 each and 2 sandwiches that are \$7 each.

$5 \times 3 + 2 \times 7$

$15 + 14$

29

b) Jason has 243 hockey cards. He gives away 3 hockeu card to each of his 2 friends

$243 - 3 \times 2$

$243 - 6$

#4 Write the variable expression for the following

a) 7 more then triple a number $3n + 7$ or $7 + 3n$

b) Ken shares his jellybeans among 4 friends $J \div 4$

c) a number is decreased by 10

$n - 10$

#5 Given the following patterns of shapes, predict the number of faces in the 9th image


image 1


image 2


image 3

Two ways to get answer

Image	Faces
1	4
2	7
3	10
4	13
5	16
6	19
7	22
8	25
9	28

+3 +3

Method 2 extend chart

Method 1 variable

$3n + 1$

$3(1)$

$3 + 1 = 4$

For $n = 9$

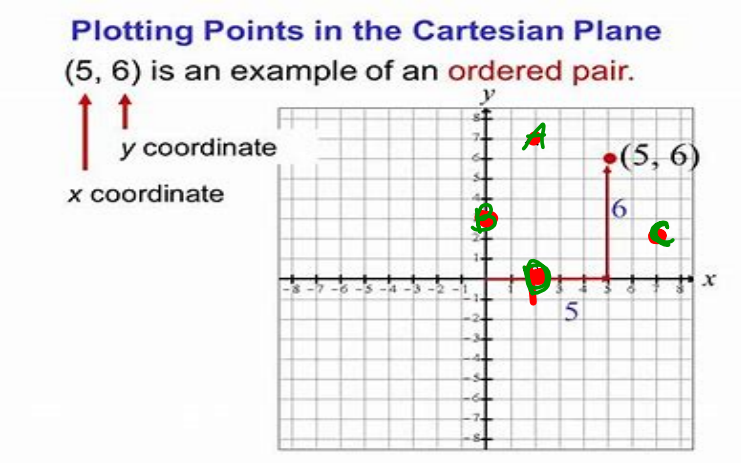
$3n + 1$

$3(9) + 1$

$27 + 1$

28 Faces

#5 Write the coordinates for each of the following.



A (2,7)

B (0,3)

C (7,2)

D (2,0)

↔ ↕

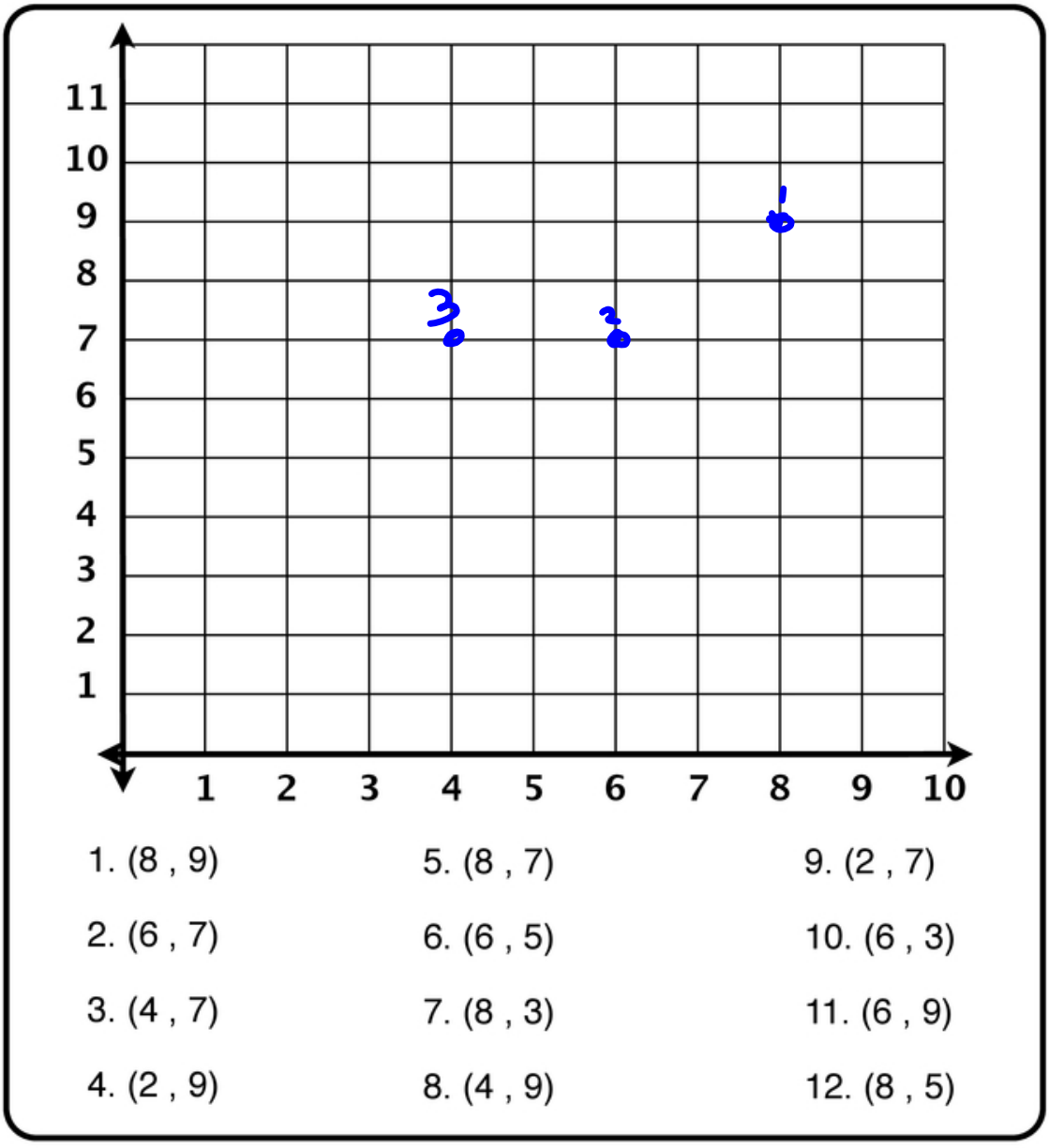
Start at + origin

#6) Plot the points

Name: _____

Coordinates

Directions: Plot the points below by starting with the X-axis (horizontal) and moving up the y-axis (vertical). Draw a dot where the two numbers meet on the coordinate plane.



1. (8 , 9)
2. (6 , 7)
3. (4 , 7)
4. (2 , 9)
5. (8 , 7)
6. (6 , 5)
7. (8 , 3)
8. (4 , 9)
9. (2 , 7)
10. (6 , 3)
11. (6 , 9)
12. (8 , 5)

BEDMAS is order of operations

Brackets first

Division or Multiplication in the order of left to right

Adding or Subtraction in the order of left to right

#7) Evaluate (Which means find the answer)

a) $10 - 3 \times 4 \div 2$

$= 10 - 12 \div 2$

$= 10 - 6$

$= 4$

b) $2 + (7+6) \times 4$

$= 2 + 13 \times 4$

$= 2 + 52$

$= 54$

Understanding equality

#8) Are the following equal

a) $\frac{2 \times 3 + 7 - 1}{6 + 7 - 1}$ $\frac{9 - 4 + 5}{5 + 5}$

$13 - 1$ 10

12

Not equal

b) $\frac{36 + 27 - 45}{63 - 45}$ $\frac{6 \times 3}{18}$

18

Equal

Commutative law is the order in which you add two numbers OR multiply two numbers does not matter

Example) 3 + 2 is the same as 2 + 3

or

4 x 5 = 5 x 4

#9) Write the commutative law for a) 6 + 3 b) 5 + y c) 7x3

3+6 y+5 3x7

Preservation of equality - whatever you do to one side of the equation you must do the exact same to the ohther.

example) 5w = 30 original Given

use addition to restore equality

(Must add the same to both side)

5w +6 = 30 +6

#10 Keep the equality by multiplication

5 = r (multiply same # to both side)

5•21= r•21

Page 40-41

#2a) d)

#3) a, b, c, d

#4) a, b, c,

#6) abc

#8a

Unit 2) Understanding Numbers

Dec 17

Study your place values of decimals and large numbers

billions ⟵ millionths

#1

a) Write the expanded form of 203 621 765

2 00 000 000 + 3 000 000 + 600 000 + 20 000 + 1 000 + 700 + 60 + 5

b) Write the written (reading) form of 203 621 765

two hundred three million six hundred twenty-one thousand seven hundred sixty-five

c) Write the expanded decimal form of 2.308 25

2 ones + 3 tenths + 8 thousandths + 2 ten thousandths + 5 hundred thousandths

2 + 0.3 + 0.008 + 0.0003 + 0.00005

d) Write the written (how you read) form of 2.308 25

two and three hundred eight thousandths twenty-five hundred thousandths

e) Given 765 213 625 What is the relation of the 6's?

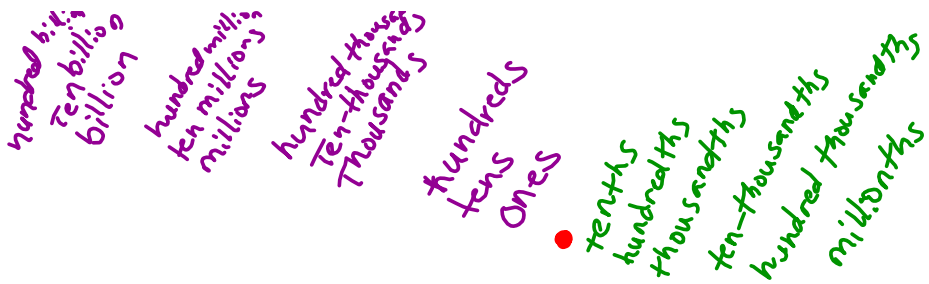
ten millions hundreds

ten-millions is 100 000 times larger than hundreds

f) How many times larger is 100 000 000 than 1000?

100 million 1 thousand

100 million is 100 000 times larger than 1000.


hundred billions
ten billion
billion
hundred millions
ten millions
millions
hundred thousands
Ten-thousands
Thousands
hundreds
tens
ones
tenths
hundredths
thousandths
ten-thousandths
hundred thousandths
millionths

Study

SOME Key words

Negatives (-)	Positives (+)
Lost/lose	Gain
withdraw	deposit
reduce	increase
go down	go
below	above
back	forward
spend	get paid

c o p y

Integers are positive or negative whole numbers

...-3, -2, -1, 0, +1, +2, +3 ...

ZERO has no sign (used for comparing)

when we draw

shaded +

unshaded -

#2) Model -4 with tiles

b) Model +7 with tiles

Study

Opposite integers same number with different signs.
They have an equal distance from zero

Example: +7 and -7 are opposites

Comparing Integers

The more negative you are the smaller you are (Owe the most money is negative)

Any positive number is larger than any negative

#3
Put the following integers in order from largest to smallest

-17, +25, -3, -5, -19, +12, +4, 0

+25, +12, +4, 0, -3, -5, -17, -19

#4) Compare using < or >

a) +10 > -20 b) -1 > -16 c) +5 < +30

B

#5) List the first 4 multiples of 7 ↗ get bigger

7, 14, 21, 28

Think multiplication chart

#6) List the first 4 multiples of 5.

5, 10, 15, 20

- Factor – a number that is multiplied by another to give a product.
- - a number that divides evenly into another number

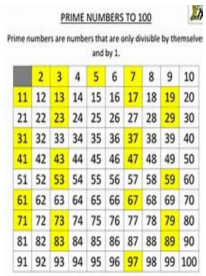
ex) 7 x 8 = 56

factors product

Definitions

- **Prime Number** – a number that has only two factors, itself and 1.

Example: 7 is ***prime*** because the only numbers that will divide into it evenly are 1 and 7.



STUDY First few prime numbers
2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37…

- **Composite number** – a number that has more than two factors.

ex) 8 is a composite number

1 x 8 = 8

2 x 4 = 8

so 8 has the factors 1, 2, 4, 8

#7) list the factors of 24

1 x 24
2 x 12
3 x 8
4 x 6

24 → 1, 2, 3, 4, 6, 8, 12, 24

#8) list the factors of 16

1 x 16
2 x 8
4 x 4

16 → 1, 2, 4, 8, 16

#9) Find the common factors of 18 and 42

18
1 x 18
2 x 9
3 x 6

List 1, 2, 3, 6, 9, 18

42
1 x 42
2 x 21
3 x 14
6 x 7

List 1, 2, 3, 6, 7, 14, 21, 42

Common factors (18, 42)
1, 2, 3, 6

Page 82 -83

#1abc

#2a

#3

#5

#7

#8

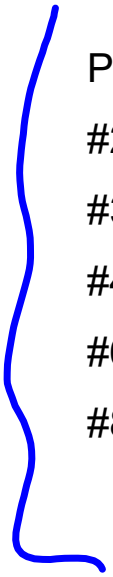
#9ac

#10a

#12ab

#15abc,

#16 abc (No number line just order)



Page 40-41

#2a) d)

#3) a, b, c, d

#4) a, b, c,

#6) abc

#8a

Attachments

Unit 1 to 7 Test OUTLINE Assignment PDF.pdf