

REVIEW

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Unit 1a Assessment

Number Sense and Fluency
Exponents, PEMDAS,
Patterns, Divisibility Rules

Math 6
Period A

*** Quiz on THURSDAY!**

Test Date: Thursday, September 19, 2019

www.mathmillard.weebly.com

*** Due by Wednesday in class**

You are responsible for information taught in class and on homework. Remember that mathematics is a subject that spirals (it builds upon itself), so keeping up with concepts as we go is very important. Good Luck!

1. Exponents

Know how to use exponents to express numbers

Know how to write expressions containing exponents in standard form.

Evaluate. (standard form)

a) $2^4 = 2 \cdot 2 \cdot 2 \cdot 2$
 $4 \cdot 4 = 16$

b) $4^3 = 4 \cdot 4 \cdot 4$
 $16 \cdot 4 = 64$

c) $3^5 = 3 \cdot 3 \cdot 3 \cdot 3 \cdot 3$
 $9 \cdot 9 \cdot 3$
 $81 \cdot 3 = 243$

Write in expanded form.

d) $13^3 = 13 \cdot 13 \cdot 13$

e) $7^5 = 7 \cdot 7 \cdot 7 \cdot 7 \cdot 7$

f) $n^4 = n \cdot n \cdot n \cdot n$

n is a variable that represents "any number"

Write as an exponent. (exponential form)

g) $6 \cdot 6 \cdot 6 \cdot 6 \cdot 6 = 6^5$

h) $5 \cdot 5 \cdot 8 \cdot 8 \cdot 8 \cdot 8 = 5^2 \cdot 8^4$

i) $10,000,000 = 10^7$
7 zeros

2. Order of Operations

Know how to use order of operation rules to solve arithmetic problems (PEMDAS)

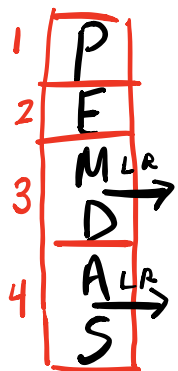
* make sure you remember: - addition/subtraction left to right
- multiplication/division left to right

Evaluate.

a) $10 - 4 + 2 + (4^2 - 14) =$
 $10 - 4 + 2 + (16 - 14)$
 $10 - 4 + 2 + 2$
 $6 + 2 + 2$
 $8 + 2$
 $= 10$

b) $20 - 12 \div 4 + 5^2 - 5 \cdot 2 =$
 $20 - 12 \div 4 + 25 - 5 \cdot 2$
 $20 - 3 + 25 - 5 \cdot 2$
 $20 - 3 + 25 - 10$
 $= 12$

5
Squared
Cubed
4
3



$$17 + 25 - 10$$

$$\checkmark$$

$$42 - 10 = 32$$

3. Numerical Patterns

Know how to identify and continue numerical patterns.

Find the rule and the next three values in the pattern.

a) 31, 38, 45, 52, 59 ...	$+7$ <u>66</u> , <u>73</u> , <u>80</u>	RULE <u>+7</u>
b) 2, 4, 3, 6, 5, 10 ...	$\begin{matrix} -1 \\ \text{9} \end{matrix}$, $\begin{matrix} \times 2 \\ \text{18} \end{matrix}$, $\begin{matrix} -1 \\ \text{17} \end{matrix}$	<u>$\times 2 ; -1$ OR times 2 minus 1</u>
c) 60, 30, 40, 20, 30 ...	$\div 2$ <u>15</u> , $+10$ <u>25</u> , $\div 2$ <u>12.5</u>	<u>$\div 2 ; +10$ OR divide 2 add 10</u>
d) 48, 43, 38, 33, 28 ...	-5 <u>23</u> , -5 <u>18</u> , -5 <u>13</u>	<u>-5 or minus 5</u>

5. Divisibility

Know the rules of divisibility and how to apply them.

Tell whether the target number is divisible by each given number.

Divisible by:

<u>Target # ↓</u>	<u>2</u>	<u>3</u>	<u>6</u>	<u>4</u>	<u>5</u>	<u>9</u>	<u>10</u>
a) 12	Y	Y	Y	Y	N	N	N
b) 300	Y	Y	Y	Y	Y	N	Y
c) 63	N	Y	N	N	N	Y	N
d) 135	N	Y	N	N	Y	Y	N
e) 70	Y	N	N	N	Y	N	Y

Please feel free to come to Extra Help for extra practice and help in any of these topics!

Extra Help this week: Wednesday after school (2:10-2:40)
Thursday morning, 7:00 – 7:30.

Whole Class Review Wednesday during class.