Test Outline

~~45~~ 43 points

-Write numbers in standard form, written form or expanded

-Write the multiples of a number (no larger than multiples of 12)

Multiples 9 → 9, 18, 27, 36, 43, 54, 63 . . . .

-Must know the definition of a prime number and a composite number and be able to give an example of each.

-Must know the first 5 prime numbers are 2,3,5,7,11

-Must be able to find common multiples of 2 or more numbers.

-Must be able to list the factors of a number using rainbow or factor pairs

-Must be able to list prime factors of a number using trees

-Given a list of integers be able to indicate which is larger or smaller when comparing (Order from least to greatest or greates to least)

- 3 BEDMAS questions

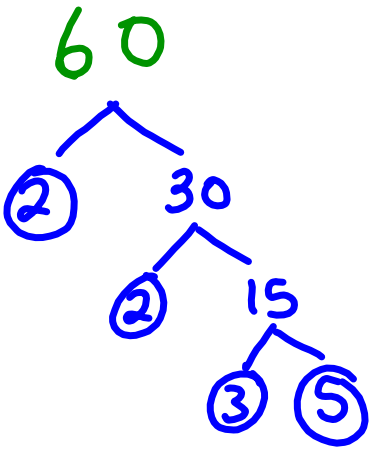
2 Word problem questions similar to our warm-ups 6 points total

Population of Miramichi is 24 000

If there is 8 smaller areas that miramichi is divided in, then how many are in 1 small area?

24 000 ÷ 8 = 3000

Each community has 3000 people.


60
2
30
2
15
3
5

Factor of #

60

1 x 60

2 x 30

3 x 20

4 x 15

5 x 12

6 x 10

rain bow

1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30, 60

Prime # → have only 2 factors 1 and itself

Ex) 2, 3, 5, 7, 11, . . .

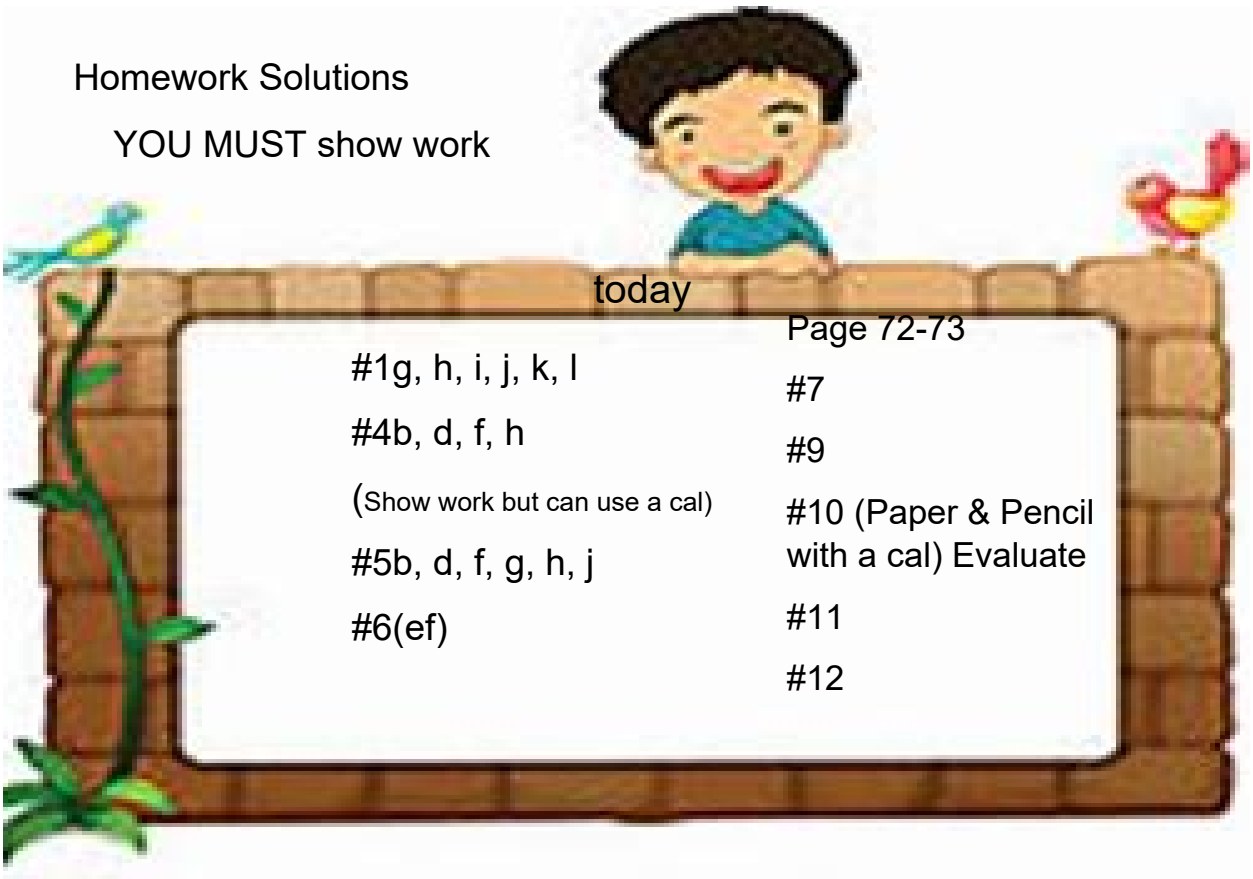
Composite → has more than 2 factors

Ex) 4, 6, 8, . . .

72 003 621 ← standard

70 000 000 + 2 000 000 + 3000 + 600 + 20 + 1 ← expandended (+)

Seventy-two million three thousand ← written
six hundred twenty-one



Homework Solutions

YOU MUST show work today

#1g, h, i, j, k, l

#4b, d, f, h

(Show work but can use a cal)

#5b, d, f, g, h, j

#6(ef)

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#7

#9

#10 (Paper & Pencil with a cal) Evaluate

#11

#12

Practice

1. Evaluate each expression.
   Use the order of operations.

a) $18 + 4 \times 2$	b) $25 - 12 \div 3$	c) $24 + 36 \div 9$
d) $12 - 8 - 4$	e) $50 - 7 \times 6$	f) $7 \times (2 + 9)$
g) $81 \div 9 - 6$	h) $25 \div (9 - 4)$	i) $13 - 6 + 8$
j) $(9 + 6) \div 3$	k) $19 + 56 \div 8$	l) $8 \times (12 - 5)$

g) $81 \div 9 - 6$
$= 9 - 6$
$= 3$

h) $25 \div (9-4)$
$= 25 \div (5)$
$= 5$

i) $13 - 6 + 8$
$= 7 + 8$
$= 15$

j) $(9+6) \div 3$
$= 15 \div 3$
$= 5$

k) $19 + 56 \div 8$
$= 19 + 7$
$= 26$

l) $8 \times (12-5)$
$= 8 \times 7$
$= 56$

4. Use a calculator to evaluate each expression.

a) $332 - 294 \div 49$
b) $209 \times 12 \div 4$
c) $312 \times 426 - 212 \times 158$
d) $2205 + 93 \div 3 - 1241$
e) $156 \times 283 + 215 \times 132$
f) $245 \times 138 \div (7 + 23)$
g) $(148 + 216) \times (351 - 173)$
h) $1258 + 341 \times 28 - 2357$

* b) $209 \times 12 \div 4$
$= 2508 \div 4$
$= 627$

d) $2205 + 93 \div 3 - 1241$
$= 2205 + 31 - 1241$
$= 2236 - 1241$
$= 995$

* f) $245 \times 138 \div (7+23)$
$= 245 \times 138 \div 30$
$\approx 33810 \div 30$
$= 1127$

h) $1258 + 341 \times 28 - 2357$
$= 1258 + 9548 - 2357$
$= 10806 - 2357$
$= 8449$

5. Use mental math to evaluate.

a) $20\,000 - 4000 \times 2$
b) $6 + 125 \div 25$
c) $(1000 + 6000) \times 3$
d) $60 \times 3 \div 9$
e) $5 \times (4 + 11)$
f) $50 + 50 \div 50$
g) $(50 + 50) \div 50$
h) $9 \times 10 - (30 + 30)$
i) $16 \div 2 \times 9$
j) $200 - 200 \div 20$

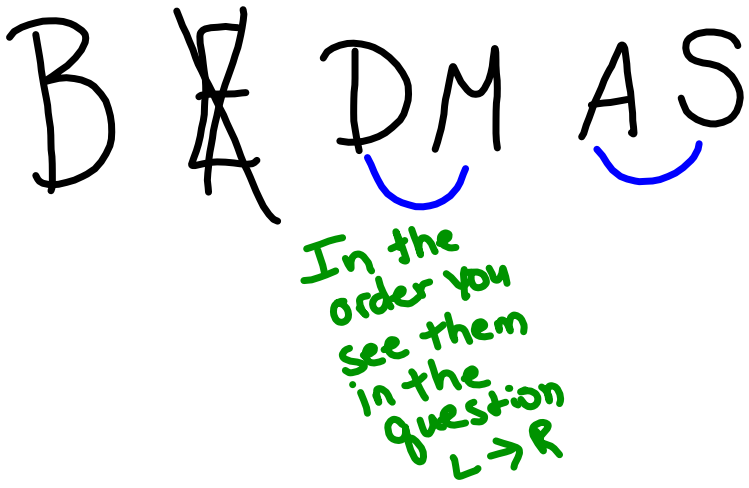
5b) $6 + 125 \div 25$
$= 6 + 5$
$= 11$

5d) $60 \times 3 \div 9$
$= 180 \div 9$
$= 20$

5f) $50 + 50 \div 50$
$= 50 + 1$
$= 51$

h) $9 \times 10 - (30 + 30)$
$= 9 \times 10 - 60$
$= 90 - 60$
$= 30$

j) $200 - 200 \div 20$
$= 200 - 10$
$= 190$


B
DM
AS
In the order you see them in the question
L → R

6. Use mental math to evaluate.

a) $4 \times 7 - 2 + 1$
b) $4 \times (7 - 2) + 1$
c) $4 \times 7 - (2 - 1)$
d) $4 \times (7 - 2 + 1)$
e) $(4 \times 7 - 2) + 1$
f) $4 \times 7 - (2 + 1)$

Which expressions give the greatest answer?

The least answer?

e) $(4 \times 7 - 2) + 1$
$= (28 - 2) + 1$
$= 24 + 1$
$= 25$

f) $4 \times 7 - (2 + 1)$
$= 4 \times 7 - 3$
$= 28 - 3$
$= 25$

7. How many different answers can you get by inserting one pair of brackets in this expression?
$10 + 20 - 12 \div 2 \times 3$
Write each expression, then evaluate it.

$(10 + 20) - 12 \div 2 \times 3$

$30 - 12 \div 2 \times 3$

$30 - 6 \times 3$

$30 - 18$

$= 12$

$10 + (20 - 12) \div 2 \times 3$

$= 10 + 8 \div 2 \times 3$

$= 10 + 4 \times 3$

$= 10 + 12$

$= 22$

$10 + 20 - (12 \div 2 \times 3)$

$= 10 + 20 - 6 \times 3$

$= 10 + 20 - 18$

$= 30 - 18$

$= 12$

There is More...

9. Alexi bought 5 T-shirts for $12 each and 3 pairs of socks for $2 a pair. Which expression shows how much Alexi spent in dollars? How do you know?

a) $5 \times 12 \times 3 \times 2$

b) $5 \times 12 + 3 \times 2$

c) $(5 + 3) \times (12 + 2)$

$5 \times \$12$ → T shirts

$+$

$3 \times \$2$ → socks

$(5 \times 12) + (3 \times 2)$

10. Choose mental math, a calculator, or paper and pencil to evaluate. For each question, how did you decide which method to use?

a) $238 - (2 \times 73)$ Cal

b) $47 \times (16 \times 18)$ Cal

c) $(36 + 14) \div 10$ Ment

d) $36 \times (48 \times 8)$ Cal

e) $60 \times (4 \div 2)$ Ment

f) $(200 + 50) \times (9 \div 3)$ Mental

a) Cal large #

11. Monsieur Lefèvre bought 2 boxes of fruit bars for his 3 children.
Each box has 6 fruit bars.
The children shared the fruit bars equally.
How many fruit bars did each child get?
Write an expression to show the order of operations you used.

shared
kids

$(2 \times 6) \div 3$

Boxes
# of bars

$18 \div 3$

6

Each kid got 6 bars.

Name _____ Date _____

Grade 6 Math

Ch. 2 Understanding Numbers: Test Review

1. Evaluate each expression. Use the order of operations.

a) $24 \div 6 \times 7$ **b)** $38 - 16 \div 4$ **c)** $55 + 15 \div 3$

d) $7 \times (4 + 8)$ **e)** $28 \div (16 - 9)$ **f)** $50 - 16 + 4$

2. Use mental math to evaluate.

a) $(70 \times 2) \div 7$ **b)** $10\,000 - 3000 \times 3$

c) $(3000 + 2000) \div 50$ **d)** $180 \div (2 \times 9)$

3. Callie bought 3 packages of drinking boxes.
Each package has 6 drinking boxes.
Callie shared the drinking boxes equally among 9 children.
How many drinking boxes did each child get?
Write a number sentence to show the order of operations you used.

4. List the first 7 multiples of 4

5. List the factors of 72 (You can use a calculator to help)

6. What are the common factors of 30 and 20?

7. Write the following number in expanded form 706 254 003 021.

8. Write the written form for the above number in question 7.

9. Order the integers from greatest to least +45, -15, -17, +7, 0 , -2, +10

10. Do the prime factorization (Tree) of 28.

11. Model -7 with tiles

Key

Ch.2 Gr.6 Test Review

1a) $24 \div 6 \times 7$
$= 4 \times 7$
$= 28$

b) $38 - 16 \div 4$
$= 38 - 4$
$= 34$

c) $55 + 15 \div 3$
$= 55 + 5$
$= 60$

1d) $7 \times (4+8)$
$= 7 \times 12$
$= 84$

1e) $28 \div (16-9)$
$= 28 \div 7$
$= 4$

1f) $50 - 16 + 4$
$= 34 + 4$
$= 38$

2)a) $(70 \times 2) \div 7$
$= 140 \div 7$
$= 20$

b) $10\,000 - 3000 \times 3$
$= 10000 - 9000$
$= 1000$

c) $(3000 + 2000) \div 50$
$= 5000 \div 50$
$= 100$

d) $180 \div (2 \times 9)$
$= 180 \div 18$
$= 10$

3) $(3 \times 6) \div 9$
$= 18 \div 9$
$= 2$

Each child gets 2 juice boxes.

4) Multiples of 4 → 4, 8, 12, 16, 20, 24, 28

5) 72
1 x 72
2 x 36
3 x 24
4 x 18
6 x 12

Key

6) Factors

30	20
1 x 30	1 x 20
2 x 15	2 x 10
3 x 10	4 x 5
5 x 6	

Factor of 30 → (1), (2), 3, (5), 6, (10), 15, 30

Factors of 20 → (1), (2), 4, (5), (10), 20

Common Factors of (20, 30) are 1, 2, 5, 10

7) 706 254 003 021

700 000 000 000 + 6 000 000 000 + 200 000 000 + 50 000 000 + 4 000 000 + 3000 + 20 + 1

8) seven hundred six billion two hundred fifty-four million three thousand twenty-one

9) +45, -15, -17, +7, 0, -2, +10 greatest to least

+45, +10, +7, 0, -2, -15, -17

10) 28 → (2), 14 → (2), (7)

11) -7 as tiles

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