Math 3 Homework 23
Part II

Independent work

1 Write down as a number expression and calculate.

Six more than 17 _____

Five less than 25 _____

Seven increased by 5 _____

The product of eight and 6 _____

Three times as large as 5 _____

Five times as large as 8 _____

Four times the sum of 5 and 6 _____

Double of 120 _____

Half of 120 _____

2 Write down the expressions instead of word sentences:

a) the sum of 29 and 2 is greater than A _____

b) B is greater than the difference between 20 and 5 _____

c) C is equal to the sum of 11, 32 and 40_____

d) the difference between 100 and D is less than E _____

3 Calculate in columns:

1230 + 805 + 39 = 1230 – 805 – 39 = 1230 × 39 =

4 Complete the number patterns:

a) ____, _____, 290, 285, _____, _____

b) 486, 488, _____, _____

c) ____, 123, 223, ____, 423

5 Fill in the missed numbers in the brackets:

a) 643 = ( ) + ( ) + ( )

b) 300 + 30 + 3 = ( )

c) 302 = ( ) + ( ) + ( )

d) 900 + 0 + 9 = ( )

6 On Monday, Scott had 14 quarters in his piggy bank. On Tuesday, he had 17 quarters. On Wednesday, he had 20 quarters in his piggy bank. If the pattern continues, how many quarters will Scott have in his piggy bank on Tuesday of the next week?

7 a) Imagine that you have 5 cards, and each card has a different number on it. If the cards only have odd numbers, what computations must you do to get an even result?

b) If the cards only have even numbers, is it possible to get an odd result? What computations must you do to get an odd result? Hint: Consider all 4 types of calculations you know (addition, subtraction, multiplication and division).

8. The shapes below are made with toothpicks and gumdrops. For example, stage 2 has 5 toothpicks and 4 gumdrops.

a) Look at the pattern and then draw stage 5. For later stages, make a drawing if it helps you answer the questions.

stage 1 stage 2 stage 3 stage 4 stage 5

b) How many toothpicks are there at stage 5?

c) How many gumdrops are there at stage 5?

d) Complete the table to show the number of toothpicks and gumdrops for stages 1 through 8.

stage	1	2	3	4	5	6	7	8
number of toothpicks		5						
number of gumdrops		4						

9. In the list below, you see the heartbeat's rates for 3 persons. Each person's heart beats at a constant rate. Whose heart will have the most beats in 1 minute? Whose heart will have the fewest beats in 1 minute?

- Adam's heart beats 25 times in 20 seconds.
- Rachel's heart beats 160 times in 120 seconds.
- Brett's heart beats 18 times in 15 seconds.

10 A dozen eggs will make four omelets. How many eggs are needed to make:

a. 8 omelets? _____

b. 1 omelet? _____

c. 9 omelets? _____

How many omelets can be made from?

d) 2 dozen eggs? _____

e) 9 eggs? _____

f) 21 eggs? _____

11 Find the sum by the most optimal way:

a) 3 + 6 + 9 + 12 + 15 + 18 + 21 = _____

b) 2 + 4 + 6 + … + 48 = _____

12 Open the parentheses, collect the like items and simplify the expressions. Remember the order of operations.

a) 126 + 62 + (a – 2b – 32) + 2a – b = _____

b) 850 – 2b – (3a + 2b) + 4(a + b) – 200 = _____

13 Calculate in the column form)

a) 180 × 35 = b) 771 × 5 = c) 604 × 70 =

14 Calculate and write down the answer with a remainder where needed:

300 ÷ 3 = 300 ÷ 4 = 300 ÷ 5 = 300 ÷ 6 =

15 Solve the following equations and check your answers:

$800 + x \div 6 = 786$ $(4 \times x) \div 10 = 280$ $b \times 18 + 312 = 402$

16 Simplify fractions (reduce fractions to the lowest terms):

$\frac{6}{8} = \frac{\square}{\square}$ $\frac{24}{32} = \frac{\square}{\square}$ $\frac{27}{9} = \frac{\square}{\square}$ $\frac{4}{8} = \frac{\square}{\square}$

$\frac{5}{15} = \frac{\square}{\square}$ $\frac{14}{21} = \frac{\square}{\square}$ $\frac{8}{32} = \frac{\square}{\square}$ $\frac{60}{90} = \frac{\square}{\square}$

$\frac{8}{16} = \frac{\square}{\square}$ $\frac{30}{50} = \frac{\square}{\square}$ $\frac{7}{28} = \frac{\square}{\square}$ $\frac{3}{9} = \frac{\square}{\square}$

17 Use {} to list the elements of the sets A, B, and C and their intersections according to a Venn Diagram for these sets.

A =
B =
C =
A ∩ B =
A ∩ C =
B ∩ C =