_____

1

Calculate.

4 m 2 dm 6 cm + 1 m 5 dm 2 cm = __ m ___ dm ___ cm

9 m 8 dm 3 cm – 6 m 2 dm 1 cm = ___ m ___dm ____ cm

Independent work

2

Find the perimeter and the area of the following shapes. Try to use the most optimal way to calculate. Show your work.

```
        13 cm
    6 cm
                  12 cm
      7 cm
```

```
                  4 cm
    10 cm    4 cm

           9 cm
```
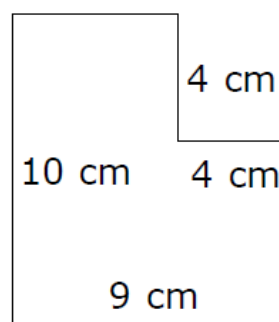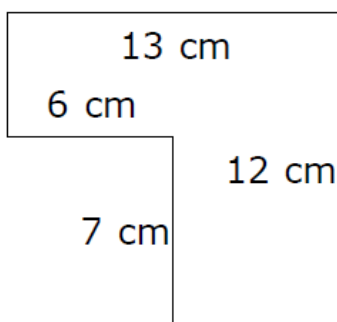
Perimeter = _____   Perimeter = _____

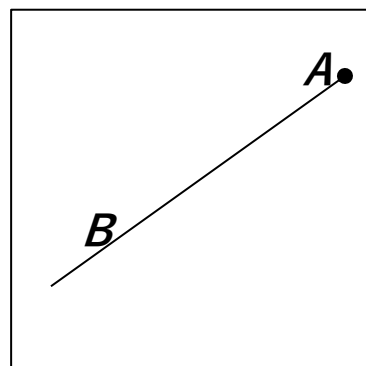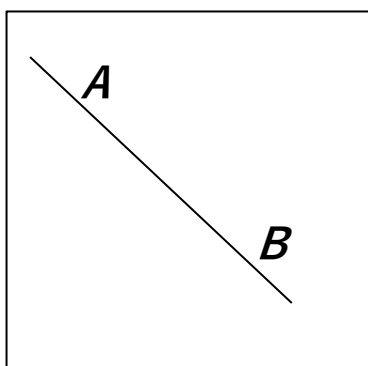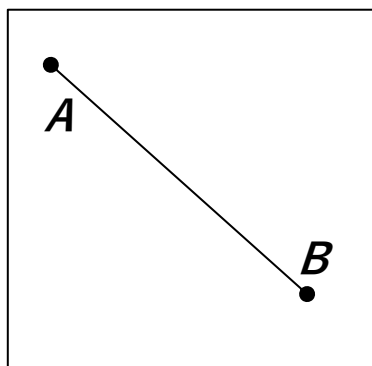Area = _____   Area = _____

3

Connect the names with the appropriate drawings.

| Straight line $\overleftrightarrow{AB}$ | | Segment $\overline{AB}$ | | Ray $\overrightarrow{AB}$ |

```
A•
  •B
```

```
A
    B
```

```
        A•
  B
```

4

Use a ruler.

. **T**

a) Plot straight line $\overleftrightarrow{NQ}$

. **Q**

b) Plot ray $\overrightarrow{RT}$

. **N**

c) Label the intersection **M**.

. **R**

d) Plot segment $\overline{MF}$.

. **F**
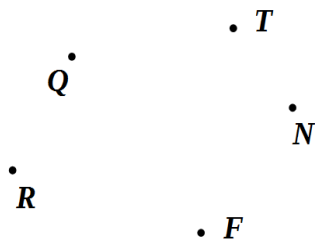
5

<u>Use a ruler and a compass</u>. Draw a line segment $\overline{AB}$, place a point C on the segment between points A and B. Write down the name of each line segment you get. Place another point D and E on the same distance from point C (use a compass to put points D and E in the same distance from point C - any distance of your choice). Point D should be between points A and C, point E should be between points C and B. between Name all line segments you get.

Step 1

A   B
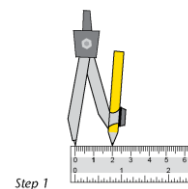
6
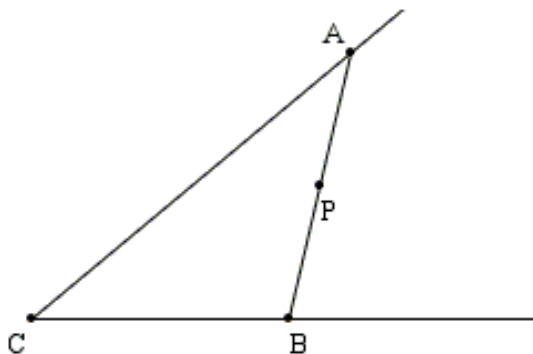
a) Draw a line segment $\overline{AB}$.
Draw another line segment $\overline{CD}$ in a way that the intersection between $\overline{AB}$ and $\overline{CD}$ is a point K.

b) Draw a line segment $\overline{AB}$ again below. Draw another line segment $\overline{EF}$ in a way that the intersection between $\overline{AB}$ and $\overline{EF}$ is a line segment $\overline{EB}$.

7

Interior and Exterior of an Angle.

Does point P belong to an $\angle ACB$? _____   Does a segment $\overline{AB}$ belong to an $\angle ACB$? _____

8

Do all points of a ray $\overrightarrow{BA}$ belong to the $\angle ACB$? _____

a) Take a blue pencil and follow the part of the ray $\overrightarrow{BA}$ which is inside the angle $\angle ACB$

b) Take a green pencil and follow the part of the ray $\overrightarrow{BA}$ which is outside the angle $\angle ACB$
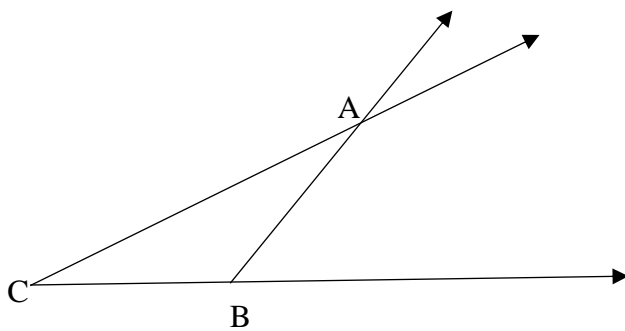
9

Use a compass and the ruler to find a midpoint between points A and D.

10 Practice to draw concentric circles. Place a point **A** in the middle of the page. Using a compass, draw 3 circles – with a radius 7 cm, 5 cm and 3 cm with the center at point A. Name each circle.

11 *The $\angle ACB$ is 43^0.* How big (in degrees) will be a complementary angle? How big (in degrees) will be a supplementary angle?

Complementary angle = _____   supplementary angle = _____
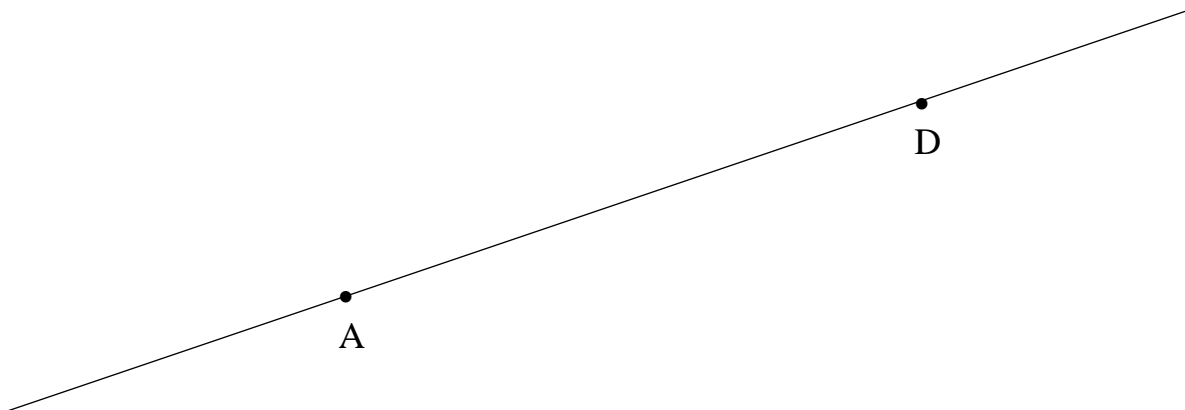
12 The square with a side equal to 1m cut down on the smaller squares with a side of 1 cm. Then all small squares are put along the straight line one by one. The width equals to 1cm. what the length is going to be?

13 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 _____

14 Calculate in columns:

$1230 + 805 + 39 =$ $1230 - 805 =$ $1230 \times 39 =$

15

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).

16

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
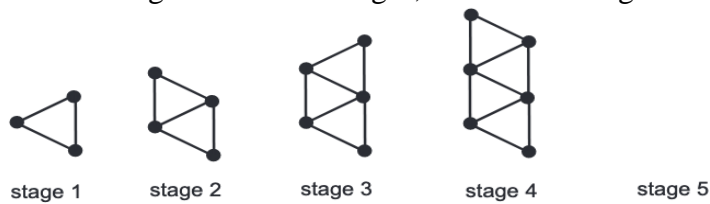
b) How many toothpicks are there at stage 5?   c) How many gumdrops are there at stage 5?

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						

17

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? _____

18

Find the sum by the most optimal way:
    a) $3 + 6 + 9 + 12 + 15 + 18 + 21 =$ _____
    b) $2 + 4 + 6 + \ldots + 48 =$ _____

19

Simplify fractions (reduce fractions to the lowest terms):

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

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

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

20

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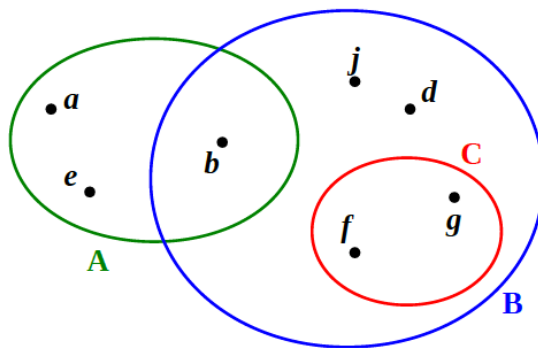
A =
B =
C =
A ∩ B =
A ∩ C =
B ∩ C =

21

Open the parentheses, collect the like items and simplify the expressions.

a) $126 + 62 + (a - 2b - 32) + 2a - b =$ _____

b) $850 - 2b - (3a + 2b) + (a + b) - 200 =$ _____