

Test Review

1

Calculate:

$$1\text{dm } 2\text{cm} - 7\text{cm} + 5\text{dm} = \underline{\hspace{2cm}}$$

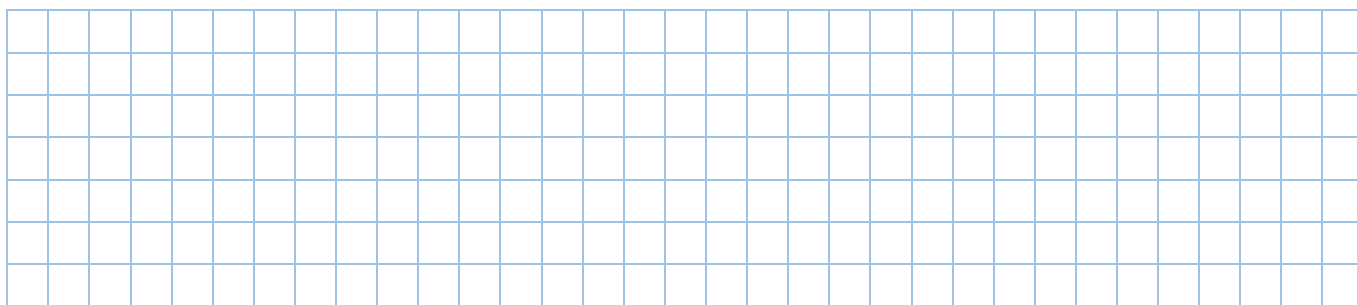
$$1\text{dm } 4\text{cm} + 6\text{cm} - 1\text{dm} = \underline{\hspace{2cm}}$$

2

Solve for x :

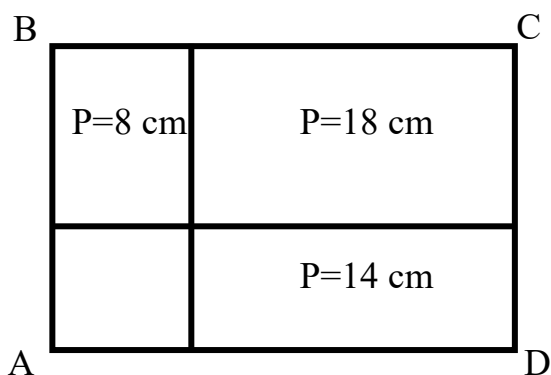
$$x - (90 - 64) = 49$$

$$(27 + 49) - a = 38$$



3

Rectangle ABCD is divided into 4 rectangles. Perimeters of 3 rectangles are known and provided on the drawing below. Find the perimeter of the rectangle ABCD if the 4th rectangle is a square.



4

Write down the expressions and find their values:

a) subtract 305 from the sum of 31 and 322 $\underline{\hspace{2cm}}$

b) to the difference between 205 and 190 add 109 $\underline{\hspace{2cm}}$

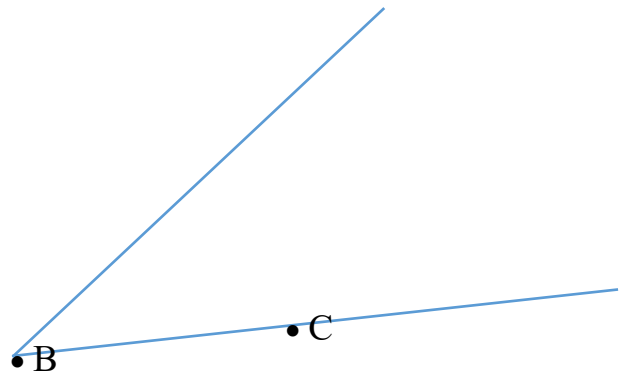
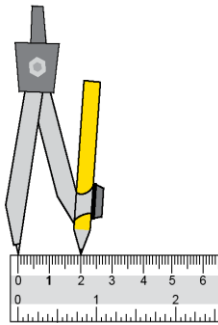
New Material I

Using a compass

A compass is a handy drawing tool to have around. Use it to draw circles, make equal size line segments or find the midpoint of a line.

8.

Use a compass to find a point A on the other side of the angle so that point A will be on the same distance from the vertex of the angle – B, as point C is.



9.

Use a compass and a straightedge (ruler) to construct a line segment which is

a) The sum of the segments a and b .

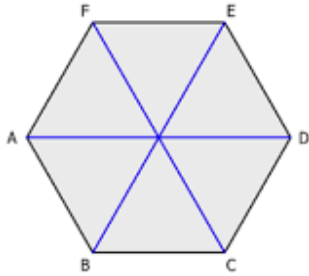


b) The difference of those segments.



10

Let's learn how to build a symmetrical hexagon using a compass and a straight edge only!



- a) Use a compass to draw a circle centered at a given point **A** and passing through another point **B** (choose your own compass opening).
- b) Place your compass with the same radius setting at the point **B** and make a mark on a circle on either side of point **B**. Mark this point with a letter **C**
- c) Place your compass with the same radius setting at the point **C** and make a mark on a circle going in the same direction as you did in step b). Mark this point with a letter **D**.
- d) Repeat step c) three more times or until you will come back to a point **B**.
- e) Take a straight edge and connect each point with two neighboring points.
- f) Using a straight edge connect each point with a center of your initial circle – point **A**.

● A

Questions: 1. If we set the distance between point A (center of the circle) and point B to be 1 unit, what is the distance AC? ____ AD? ____.

2. What can you tell about the 6 angles, between segments connecting center of the circle A with points B, C, D, E, F, G – $\angle BAC$, $\angle CAD$, $\angle DAE$, $\angle EAF$, $\angle FAG$ and $\angle GAB$?

3. Can you tell the measure of each angle in degrees, if we know that the full angle is 360° ?

New Material II

Multiplying Bigger Numbers:

When multiplying by two-digit number,
We can use a “partial products” method.

CALCULATE: 179×64

Here is the answer using the partial products algorithm:

Here is a rectangle with side lengths $100 + 70 + 9$ and $60 + 4$ that shows all the partial products as the area of part of the rectangle:

	100	70	9
60	$60 \times 100 =$ 6,000	$60 \times 70 =$ 4,200	$60 \times 9 =$ 540
4	$4 \times 100 =$ 400	$4 \times 70 =$ 280	$4 \times 9 =$ 36

$$\begin{array}{r}
 6,000 \\
 4,200 \\
 540 \\
 400 \\
 280 \\
 + 36 \\
 \hline
 11,456
 \end{array}$$

$$\begin{array}{r}
 179 \\
 \times 64 \\
 \hline
 9 \times 4 = 36 \\
 70 \times 4 = 280 \\
 100 \times 4 = 400 \\
 9 \times 60 = 540 \\
 70 \times 60 = 4200 \\
 100 \times 60 = 6000 \\
 \hline
 11,456
 \end{array}$$

Multiply:

11

$321 \times 22 =$

$482 \times 36 =$

$503 \times 84 =$

