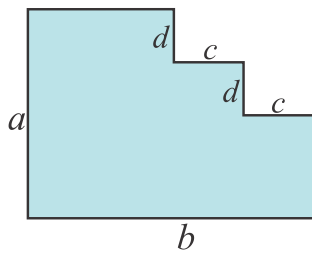


1. A pipe can drain a swimming pool in 6 hours. The pool is  $\frac{4}{5}$  full of water. How many hours and minutes will it take to drain it?
  
2. Find the expression that will give you:
  - a) the perimeter of the figure below
  - b) the area of the figure below



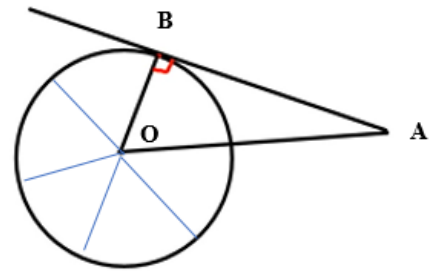
3. There are 6 false equalities below. Replacing only one stick in each of them makes the equality true. Find the stick and show where to move it:

a)  $XII + IX = II$       d)  $V - V = I$

b)  $X = VII - III$       e)  $X + X = I$

c)  $V - V = XII$       f)  $V - I + V = II$

4. Find the measurement of the angle OAB (it is the angle with the vertex "A")



5. Compute the value of the expressions  $9a^2$ ,  $(9a)^2$ ,  $-9a^2$ ,  $(-9a)^2$  if :

- a)  $a = \frac{1}{6}$
- b)  $a = -0.1$
- c)  $a = -\frac{2}{3}$
- d)  $a = 0.4$

6. Rewrite the following expression without parenthesis:

$$\left(\frac{1}{2} + a\right)(2 + a) =$$

$$(n - a)(n + a) =$$

$$(a + b)(a + b) = (a + b)^2 =$$

$$(2a + 2b)(b - c) =$$

7. \* In a restaurant's dessert menu chocolate mousse cake is 25% more expensive than their cheese cake. By how many percent is the cheese cake less expensive than the chocolate mousse cake?

8. Julia has to write a 32-pages paper in 3 days. On the first day she wrote  $\frac{3}{8}$  of the paper, on the second day she wrote  $\frac{1}{4}$  of the paper. How many pages does she need to write on the third day?

9. I have 15 new books to choose from.

A) I have a 5-day vacation and I want to read 1 book every day. How many possible ways are there for me to read these 5 books?

B) I have a 3-day long vacation and I want to read 1 book every day. How many possible ways are there for me to read these 3 books?

10. Compute:

a.  $\left(-\frac{1}{2}\right)^5$

b.  $\left(-\frac{2}{3}\right)^4$

c.  $\left(-\frac{4}{5}\right)^3$

11. Compute:

a.  $-3 + \left(-1\frac{1}{5}\right) =$

b.  $-3\frac{8}{19} + \left(-1\frac{11}{19}\right) =$

c.  $-7\frac{1}{3} + \left(-1\frac{2}{3}\right) =$

