Accelerated math. Homework 11.





a. $(-3)^3$;	f. $(-2)^7$;	j. $\frac{1}{3^2}$;
b. -3^3 ;	g. $(2 \cdot 3)^3$;	k. 3^{-2} ;
c. $(-3)^4$	h. $2 \cdot 3^3$;	1. $(-3)^{-2}$;
d. -3^3	$\left(\frac{1}{2}\right)^2$:	$m (-5 \cdot 2)^3$
e^{-2^7} :	··· (₃) ,	

Remember, that $a^n : a^m = a^{n-m} = a^{n+(-m)} = a^n \cdot \frac{1}{a^m} = a^n \cdot a^{-m}$

2. Prove that values of the following expressions do not depend from the value of variables. Find these values. Hint: simplify these expressions.

a)
$$\frac{4^m + 4^m + 4^m + 4^m}{4^m : 4^2}$$
; b) $\frac{10^{pa3}}{10^n + 10^n + \dots + 10^n}$; c) $\frac{99^{pa3}}{99^{k} + 99^k + \dots + 99^k}{99^{k+2} : 99}$

3. a. Prove, that in isosceles triangle medians conducted to the equal sides are equal.

b. **(This problem is much more difficult than the problem a. Just write any idea you can come up with).Prove, that if two medians in a triangle are equal, this triangle is an isosceles triangle.Be careful about what you know and what you want to prove in each case.Hint: look for congruent (equal) triangles.

What about altitudes? Can you formulate similar statement about altitudes? Hint: look for congruent (equal) triangles.

- 4. Draw a triangle with sides 5 cm, 7 cm, and 7 cm (use ruler and compass). Mark the midpoints of equal sides (use ruler), draw medians to the equal sides. Measure these two medians. Are they equal?
- 5. Draw the triangle with sides 6 cm, 8 cm, and 8 cm (use ruler and compass). Draw all two altitudes (use ruler and anything which has a right angle) to the equal side. Measure them. Are they equal?

