

Math 4b. Homework 21.



1. Reduce the fractions

a.  $\frac{9^5 \cdot 27}{3^9}$ ;      b.  $\frac{2^{10} \cdot 8}{4^6}$ ;      c.  $\frac{10^4 \cdot 100}{1000^2}$ ;

2. What would be the last digit of a number:

a.  $2026^{26}$ ;      b.  $427^7$ ;      c.  $10^{12345}$ ;

3. What is the last digit of a product:

$101 \cdot 102 \cdot 103 \cdot 104 \cdot 105 \cdot 106 \cdot 107 \cdot 108 \cdot 109$

4. Evaluate (answer is 50):

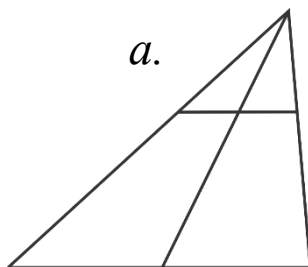
$$\frac{(1.75 + 2\frac{1}{3}) \cdot 1\frac{5}{7}}{\frac{3}{250} : (1.23 - \frac{3}{5} \cdot 1.05) + 0.12}$$

5. The trip from home to school takes Robert 20 minutes. One day, on the way to school, he remembered that he had forgotten his pen at home. If he continues on his way at the same speed, he will arrive at school 3 minutes before the bell, but if he returns home for the pen and then goes to school at the same speed, he will be 7 minutes late. What fraction of the distance had he already covered before he remembered the pen?

(Assume that the time needed to go into the house and take the pen is negligible.)



6. How many triangles are drawn in picture *a*, and how many quadrilaterals are drawn in picture *b*?



7. One number is 9 greater than the other and is 9 times as large. Find these numbers.