MATH 5: HANDOUT 14
REVIEW.

HOMEWORK: REVIEW

0. Solve the following equation: $3 - 5(2 - x) = 18$

1. Do the operations with binary numbers:
$101101 + 110100$
$11011101 - 10010$

2. If $a = 3 \times 10^{-7}$, $b = 5 \times 10^{-5}$, what is a^2? $1/b$? $a^2 \div b^3$?

3. For the following problem, you need to know that the speed of light is about $300,000$ km/sec, and one year is about $3 \cdot 10^7$ seconds.
(a) How long would it take light to travel from Sun to Earth? The distance is about $1.5 \cdot 10^8$ km
(b) In astronomy, a common unit of distance is a light year: the distance light covers in one year. How many kilometers is it?
(c) Another common unit of distance in astronomy is a parsec, which is approximately equal to 3×10^{13} km. Can you compute how many parsecs are there in one light year? How many parsecs between Earth and Sun? between Earth and the Andromeda Nebula ($\approx$ 2,000,000,000,000,000,000,000 km)?

4. Solve (different letters stand for different digits):

$$\begin{array}{rr} & \texttt{FORTY} \\ + & \texttt{TEN} \\ + & \texttt{TEN} \\ \hline & \texttt{SIXTY} \end{array}$$