

All questions should be submitted by 4pm on Friday March 19th. Assignments can be submitted at your tutorial, or to the MATH1040/7040 assignment boxes (4th floor Priestley Building #67). **Make sure that your name, student number, tutorial group and your tutor's name are on each sheet of your answers.** You do not need a cover sheet nor do you need to include the question sheet. Solutions will be distributed in class later.

- Describe your mathematical history, for example, did you like maths at school, what did you find easy/difficult etc. Also write about what you want to get out of this course. Write at least six (6) lines.
- Answer each of the following questions, showing all working.
 - Evaluate $|16 - 22|$
 - Evaluate $(-4)^2$.
 - Is 77 a prime number? Why?
 - Evaluate $\frac{-9}{11} + \frac{3}{20}$
 - Evaluate $\frac{-2}{19} - \frac{-15}{4}$
 - Evaluate $\frac{1}{10} \times \frac{-12}{15}$
 - Evaluate $\frac{1}{-1} \div \frac{15}{-3}$
 - Evaluate $\frac{0}{-4} \div \frac{-43}{35} \times \frac{19}{-42} - \frac{-5}{-31}$
 - Evaluate $4 \times 5 + 6$ and $4 \times (5 + 6)$
- Evaluate each of the following:
 - $(-2)^5$
 - $(-5)^2 + \sqrt{16} - 3(\frac{1}{3} \div \frac{1}{6})$
- Insert mathematical operator(s) (that is, $+$, $-$, \times , \div) and/or a set of brackets in each of the following in order to make the statement true:
 - $4 \quad 2 \quad 4 = -4$
 - $10 \quad 5 \quad 2 = 1$
 - $16 = 6 \quad 2 \quad 3 \quad 4$
- Roughly estimate the number of buckets of water it would take to fill your bedroom. Assume that no water leaks out. (You can simplify your bedroom's design to make your estimate easier.)
- Answer each of the following questions, showing all working.
 - Expand and simplify $3x(-4z + 5)$
 - Expand and simplify $(2x + 3)(4x - 2)$

(continued over...)

7. The UQ Maths cricket team recently scored 216 runs in the final of the Pi Cup against Physics. Shane scored $\frac{1}{8}$ of the runs, Sean scored $\frac{1}{12}$ and Sheyenne $\frac{1}{4}$.
- (a) What fraction of the total score was made by these three people?
 - (b) How many runs was this?
 - (c) What fraction of the total score was made by the rest of the team?
 - (d) How many runs was this?
 - (e) If Bazza, Dazza and Wazza scored $\frac{2}{3}$ of the runs made by the rest of team, what fraction of the total score did they make?

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