

Mth 28.5, Homework 1 on Sections 1.2, 1.3

Due by Wed, Sept 9.

Here are 20 questions for you to try. Write all your working out and answers by hand on your own notepaper and hand them to me next week. Please use lots of space and as many pages as you want, so I can include corrections or comments - otherwise I will ask you to redo it. It must be your own note paper, not a printout of this. You do not need to write the questions, but it is very important that you show clearly any work you had to do to get your answers. Each question is worth 2 points for a total of 40.

Section 1.2 Integers

- (1) Compute these absolute values: **(a)** $|-6|$, **(b)** $|-3 - 10|$, **(c)** $|8 - 5|$
 - (2) Label each of these as true or false: **(a)** $-4 < 3$, **(b)** $6 > 2$, **(c)** $-4 < -10$
 - (3) Perform these additions and subtractions:
 - (a)** $8 + 3$
 - (b)** $-8 + 3$
 - (c)** $-8 + (-3)$
 - (d)** $8 - 3$
 - (e)** $-8 - (-3)$
 - (f)** $3 - 8$
 - (4) Show the steps to simplify: $10 + 3 - 7 + (-4) - (-2)$ (Hint: go from left to right.)
 - (5) Simplify: $4(2)(-3)(-10) \div 8$ (Hint: go from left to right multiplying and dividing.)
 - (6) Compute these powers: **(a)** 3^4 , **(b)** $(-3)^4$, **(c)** -3^4
(Hint: parts (b) and (c) are not the same.)
 - (7) Use the correct order of operations to simplify: $4 + 3(-5) - 1 + 6$
 - (8) Find: $(11 - 14)(8 - 11)$
 - (9) Simplify: $25 - 3(4 - 9)$ (Hint: answer is not -110 .)
 - (10) Evaluate $8x - 2y - 6$ when $x = -3$ and $y = -5$.
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More on the next page...

Section 1.3 Fractions

Do all of these by hand. Do not use decimals – your answers should be fractions.

(11) For this fraction, identify the numerator: $\frac{3}{8}$

(12) Simplify: (a) $\frac{6}{10}$, (b) $\frac{8}{8}$, (c) $\frac{4}{1}$, (d) $\frac{60}{105}$

(13) Multiply and make sure your answer is simplified: $\frac{3}{10} \cdot \frac{4}{5}$

(14) Simplify: $\frac{2}{7} \div \frac{3}{5}$

(Hint: **Keep** the first fraction, **change** the operation to multiplication and **flip** over the second fraction.)

(15) Simplify: $\left(-\frac{33}{60}\right) \left(+\frac{40}{88}\right)$

(16) Add: (a) $\frac{3}{5} + \frac{1}{5}$, (b) $\frac{3}{5} + \frac{2}{3}$

(Hint: part (b) needs a common denominator to add them. And those 3s don't cancel!)

(17) Calculate: $\frac{9}{16} - \frac{7}{12}$ (Hint: least common denominator is $3 \cdot 4 \cdot 4 = 48$)

(18) Find: $\frac{5}{\frac{1}{4} + \frac{1}{3}}$

(Hint: add the bottom fractions first, then write $5 = \frac{5}{1}$ and divide.)

(19) Simplify: $1 - \frac{5}{6} \div \frac{1}{12}$

(20) Evaluate $x^2 - 3y$ when $x = \frac{3}{2}$ and $y = -\frac{1}{6}$.

If you get stuck on a question or aren't sure if you understand it:

- Go over the relevant class notes and section in the textbook.
- Ask me about it after class.
- Come to my office hours: Mon 12:00 - 1:00, Wed 12:00 - 1:00 in CP 317.
- Go to the Math Tutorial Lab in-person in CP 303 or online.