

Math 01, Homework 5 on Sections 3.6 - 3.10

Write all your working out and answers on your own notepaper - no need to write the questions. Please use lots of space.

It is very important that you show clearly any work you had to do to get your answers. Just writing the answer down with no work shown is not enough. All 18 questions are worth 2 points each.

Do these first 10 questions and *check that your answers match the solutions on page 2*. If you don't get the same answers then try to fix them by looking at your notes or the book or asking me. Only do the last eight questions when you are sure you understand the first ten.

- (1) Give the prime factorization of 360.
 - (2) Find the greatest common factor (GCF) of 72 and 84.
 - (3) Find the GCF of 48 and 90. Use it to reduce the fraction $\frac{48}{90}$ to lowest terms.
 - (4) Multiply, using pre-cancellation: $12 \cdot \frac{5}{8} \cdot \frac{2}{9}$
 - (5) Calculate: (a) $\frac{3}{10} + \frac{7}{10}$ (b) $\frac{1}{3} + \frac{3}{4}$
 - (6) Calculate: (a) $3 - \frac{1}{3}$ (b) $\frac{1}{2} - \frac{2}{5}$
 - (7) Find: $\frac{1}{5} + \frac{3}{25} - \frac{3}{10}$
 - (8) Which is bigger: $\frac{9}{10}$ or $\frac{9}{11}$
 - (9) List in increasing order: $\frac{1}{2}, \frac{1}{3}, \frac{5}{12}$
 - (10) Compute: (a) $\frac{1}{5} \div \frac{2}{3}$ (b) $\frac{7}{12} \div \frac{14}{9}$
-

Eight more questions¹. Show clearly all your working out and reasoning.

- (11) Give the prime factorization of 260.

¹questions continue on page 2

(12) Find the GCF of 231 and 385. Use it to reduce the fraction $\frac{231}{385}$ to lowest terms.

(13) Multiply, using pre-cancellation: $10 \cdot \frac{6}{5} \cdot \frac{7}{9}$

(14) Calculate: (a) $\frac{2}{9} + \frac{8}{9}$ (b) $\frac{2}{3} + \frac{1}{4}$

(15) Calculate: (a) $4 - \frac{2}{5}$ (b) $\frac{10}{9} - \frac{5}{6}$

(16) Find: $\frac{1}{7} + \frac{3}{14} - \frac{3}{4}$

(17) List in increasing order: $\frac{5}{6}, \frac{4}{3}, \frac{7}{9}$

(18) Compute: (a) $\frac{5}{7} \div \frac{7}{2}$ (b) $\frac{11}{12} \div \frac{33}{4}$

Answers to questions (1)-(10):

(1) $2^3 \cdot 3^2 \cdot 5$

(2) GCF is 12

(3) GCF is 6 and fraction reduces to $\frac{8}{15}$

(4) $\frac{5}{3}$

(5) (a) 1 (b) $\frac{13}{12}$

(6) (a) $\frac{8}{3}$ (b) $\frac{1}{10}$

(7) $\frac{1}{50}$

(8) $\frac{9}{10}$ is bigger

(9) $\frac{1}{3} < \frac{5}{12} < \frac{1}{2}$

(10) (a) $\frac{3}{10}$ (b) $\frac{3}{8}$