

Math 01, Homework 5 on Sections 3.6 - 3.10

Write all your working out and answers on a separate sheet. It is very important that you show clearly any work you had to do to get the answer. These first ten questions are 2 points each and **the answers are on page 2**.

- (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) $\frac{7}{12} \div \frac{14}{9}$
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These next eight questions are 2 points each. Show clearly all your working out and reasoning.

- (11) Give the prime factorization of 260.
- (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) $\frac{3}{8}$