

1 Classwork 1 MAT 1275 Professor Chiu

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- This classwork consists of 2 questions.
- Show all work and justify your answers.
- Scientific calculators are allowed.
- Wishing you success.

① observation:

3 counts of " $\frac{1}{10}$ "
5 counts of " $\frac{1}{6}$ "

⇒ the units are not the same

1. Combine and reduce:

② Find the same unit (common denominator)

factor of 10: 1×10 , 2×10 , 3×10 , 4×10
 factor of 6: 1×6 , 2×6 , 3×6 , 4×6 , 5×6

$$\frac{3}{10} - \frac{5}{6}$$

② answer

$$= \frac{3 \cdot 3}{10 \cdot 3} - \frac{5 \cdot 5}{6 \cdot 5} = \frac{9}{30} - \frac{25}{30} = \frac{9-25}{30} = \frac{-16}{30} = -\frac{8 \times 2}{15 \times 2} = -\frac{8}{15} \times \frac{2}{2} = -\frac{8}{15}$$

= 1

2. Evaluate

① Observation

- $\frac{20}{9}$ and $\frac{5}{3}$ are improper fractions (:ready to use)
- divided by $\frac{5}{3}$
 ⇒ multiply $\frac{3}{5}$ (the reciprocal of $\frac{5}{3}$)

$$\frac{20}{9} \div \frac{5}{3}$$

② Answer

$$= \frac{20}{9} \times \frac{3}{5} = \frac{60}{45} = \frac{4 \times 5 \times 3}{3 \times 3 \times 5} = \frac{4}{3} \times \frac{15}{15} = \frac{4}{3}$$

= 1