

Grade 8 Mathematics Worksheet

Algebraic equations

Questions:

1. $\frac{2}{3} + \frac{1}{5} = \frac{5}{6} + \dots$

- A) $\frac{8}{9}$
- B) $-\frac{11}{4}$
- C) $\frac{1}{30}$
- D) $-\frac{2}{2}$

Grade 8 Mathematics Worksheet

Solution

Algebraic:

$$\begin{aligned}\frac{2}{3} + \frac{1}{5} &= \frac{5}{6} + x \\ \therefore \frac{10+3}{15} &= \frac{6x+5}{6} \\ \therefore \frac{13}{15} &= \frac{6x+5}{6} \\ \therefore 78 &= 90x + 75 \\ \therefore 90x &= 3 \\ \therefore x &= \frac{3}{90} = \frac{1}{30}\end{aligned}$$

Answer is (C)

Numerical:

$$\begin{aligned}\frac{2}{3} + \frac{1}{5} &= \frac{5}{6} + \dots \\ LCD : 3, 5, \text{ and } 6 &= 30 \\ \therefore \frac{2}{3} + \frac{1}{5} &= \frac{20+6}{30} = \frac{26}{30} \\ \text{and } \frac{5}{6} &= \frac{25}{30} \\ \text{So: } \frac{25}{30} + \frac{1}{30} &= \frac{26}{30}\end{aligned}$$

So the answer is C

This question is difficult. Learners do not need algebra here, but it sure makes it easier to solve. The question can be asked at a grade 7 level, but then the tools that learners will use will be different or possibly not.