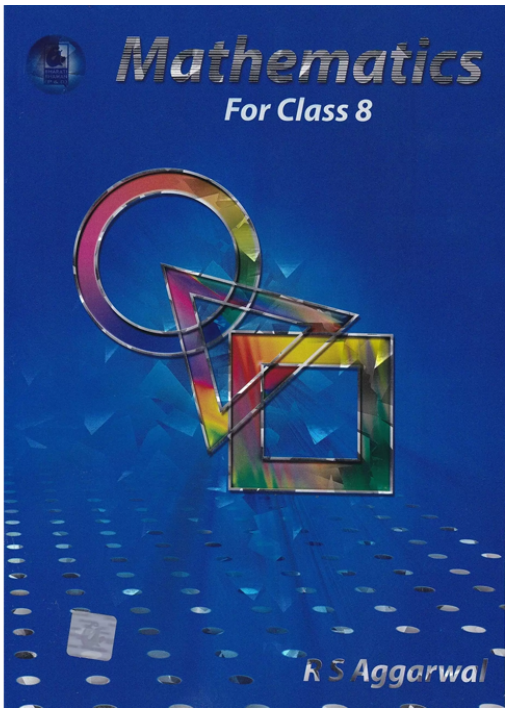
RS Aggarwal Solutions for Class 8 Maths Chapter 13–Time and Work

Class 8 - Chapter 13 Time and Work



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RS Aggarwal Solutions for Class 8 Maths Chapter 13–Time and Work

Class 8: Maths Chapter 13 solutions. Complete Class 8 Maths Chapter 13 Notes.

RS Aggarwal Solutions for Class 8 Maths Chapter 13–Time and Work

RS Aggarwal 8th Maths Chapter 13, Class 8 Maths Chapter 13 solutions

Ex 13A

Q1.

Answer :

Work done by Rajan in 1 day $= \frac{1}{24}$

Work done by Amit in 1 day $= \frac{1}{30}$

Work done by Amit and Rajan together in 1 day $= \frac{1}{24} + \frac{1}{30} = \frac{54}{720} = \frac{3}{40}$

$\therefore$ They can complete the work in $\frac{40}{3}$ days, i.e., $13\frac{1}{3}$ days if they work together.

Q2.

Answer :

Time taken by Ravi $= 15$ h
Time taken by Raman $= 12$ h
Work done per hour by Ravi $= \frac{1}{15}$
Work done per hour by Raman $= \frac{1}{12}$
Work done per hour by Ravi and Raman together $= \frac{1}{15} + \frac{1}{12} = \frac{9}{60} = \frac{3}{20}$
$\therefore$ Time taken by Ravi and Raman together to finish the work $= \frac{20}{3}$ h $= 6\frac{2}{3}$ h

Q3.

Answer :

Time taken by A and B to finish a piece of work $= 6$ days
Work done per day by A and B $= \frac{1}{6}$
Time taken by A alone $= 9$ days
Work done per day by A alone $= \frac{1}{9}$
Work done per day by B $= \left(\text{work done by A and B}\right) - \left(\text{work done by A}\right)$
$= \frac{1}{6} - \frac{1}{9} = \frac{3-2}{18} = \frac{1}{18}$
$\therefore$ B alone will take 18 days to complete the work.

Q4.

Answer :

Time taken by Raju $= 15$ h

Work done by Raju in 1 h $= \frac{1}{15}$

Time taken by Raju and Siraj working together $= 6$ h

Work done by Raju and Siraj in 1 h $= \frac{1}{6}$

Work done by Siraj in 1 h $= \left(\text{work done by Raju and Siraj}\right)$

$- \left(\text{work done by Raju}\right)$

$= \frac{1}{6} - \frac{1}{15} = \frac{5-2}{30} = \frac{3}{30} = \frac{1}{10}$

$\therefore$ Siraj will take 10 h to overhaul the scooter by himself.

Ex 13B

Q1.

Answer :

(b) 6 days

A can do a work in 10 days.

A's 1 day work $= \frac{1}{10}$

B can do a work in 15 days.

B's 1 day work $= \frac{1}{15}$

$\left(\text{A} + \text{B}\right)$'s 1 day work $= \frac{1}{10} + \frac{1}{15} = \frac{5}{30} = \frac{1}{6}$

A and B together will take 6 days to complete the work.

Q2.

Q3.

Answer :

(d) 48 days

A can do a job in 16 days.
B can do the job in 12 days.
Suppose C can do the job in x days.
A's 1 day work $= \frac{1}{16}$
B's 1 day work $= \frac{1}{12}$
C's 1 day work $= \frac{1}{x}$
A, B and C together can complete the work in 6 days.
$(A + B + C)$'s 1 day work $= \frac{1}{6}$
Therefore, $\frac{1}{6} = \frac{1}{16} + \frac{1}{12} + \frac{1}{x}$
$\Rightarrow \frac{1}{x} = \frac{1}{6} - \frac{1}{16} - \frac{1}{12} = \frac{8-3-4}{48} = \frac{1}{48}$
$x = 48$
Therefore, C alone can complete the job in 48 days.

Q4.

Answer :

(a) 30 days

Let B take x days to complete the work.

Then A takes $\left(x+\frac{50}{100}\,x\right)=1.5x$

A's 1 day's work $=\frac{1}{1.5x}=\frac{2}{3x}$

B's 1 day's work $=\frac{1}{x}$

$\left(A+B\right)$ *takes* 18 *days to complete the work.*

$\left(A+B\right)$*'s 1 day's net work* $=\frac{1}{18}$

or $\frac{1}{18}=\frac{2}{3x}+\frac{1}{x}$

$\Rightarrow \frac{1}{18}=\frac{5}{3x}$

By cross − multiplication, we get :

$x=30$ *days*

$\therefore$ *B alone will take* 30 *days to complete the work.*

RS Aggarwal Class 8 Solutions

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He was born on January 2, 1946 in a village of Delhi. He graduated from Kirori Mal College, University of Delhi. After completing his M.Sc. in Mathematics in 1969, he joined N.A.S. College, Meerut, as a lecturer. In 1976, he was awarded a fellowship for 3 years and joined the University of Delhi for his Ph.D. Thereafter, he was promoted as a reader in N.A.S. College, Meerut. In 1999, he joined M.M.H. College, Ghaziabad, as a reader and took voluntary retirement in 2003. He has authored more than 75 titles ranging from Nursery to M. Sc. He has also written books for competitive examinations right from the clerical grade to the I.A.S. level.

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