Exercise 9C

Number of days taken to reap the field by 16 men = 30 days
Number of days taken to reap the field by 1 man = 30×16 days   [Less men, more days]
Number of days taken to reap the field by 20 men = $\frac{30 \times 16}{20}$ = 24 days   [More men, less days]

Hence, 20 men will take 24 days to reap the field.

The correct option is (b).

Q10
Answer :

Time taken to fill the tank by 10 pipes = 24 min
Time taken to fill the tank by 1 pipe = 24 ×10 min   [Less pipes, more time taken]
Time taken to fill the tank by 8 pipes = $\frac{24 \times 10}{8}$ min = 30 min   [More pipes, less time taken]
Hence, it will take 30 minutes to fill the tank if two pipes go out of order.

The correct option is (c).

Q11
Answer :

Cost of 72 eggs = Rs 108
Cost of 1 egg = Rs $\frac{108}{72}$
Cost of 132 eggs = RS $\frac{108}{72} \times 132$ = Rs 198

Hence, 132 eggs will cost Rs 198.

The correct option is (d).

Q12
Answer :

Time taken by 12 workers to complete the job = 4 h
Time taken by 1 worker to complete the job = 4×12 h
Time taken by 15 workers to complete the job = $\frac{4 \times 12}{15}$ = 3 h 12 min

Hence, 15 workers will complete the job in 3 h 12 min.

The correct option is (b).

Q13
Answer :

500 men had enough food for 24 days.
1 man had enough food for 24×500 days.   [Less men, more days]
800 men had enough food for $\frac{24 \times 500}{800}$ = 15 days   [More men , less days]

Hence, the food will now last for 15 days after the reinforcement of 300 men.

The correct option is (a).

Q14
Answer :

(c) 98

No. of rounds around the cylinder of radius 14 cm = 140
No. of rounds around the cylinder of radius 1 cm = 140×14 [Less radius, more rounds]
No. of rounds around the cylinder of radius 20 cm = $\frac{140 \times 14}{20}$ = 98   [More radius, less rounds]

Hence, the rope makes 98 rounds around the circumference of the cylinder of radius 20 cm.

Q15

Answer :

No. of toys made in $\frac{2}{3}$ h = 1

No. of toys made in 1 h = $\frac{3}{2}$

No. of toys made in $7\frac{1}{3}$ h = $\frac{3}{2} \times \frac{22}{3} = 11$

Hence, the worker will make 11 toys in $7\frac{1}{3}$ h.

The correct option is (d).

Q16

Answer :

Men required to finish the work in 8 days = 10

Men required to finish the work in 1 day = 10×8   [More day, less men]

Men required to finish the work in half a day = $\frac{10 \times 8}{\frac{1}{2}} = 10 \times 8 \times 2$ = 160   [Less days, more men]

Hence, 150 (i.e., 160 − 10) men are added to finish the work in half a day.

The correct option is (d).

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