



MATHS

BOOKS - RS AGGARWAL MATHS (HINGLISH)

UNITARY METHOD

Solved Example

1. If the cost of 9 toys is Rs 333. find the cost of one toy



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2. If 25 metres of cloth costs Rs 1550. how many metres of it can be for RS 2016?



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3. If 13 metres of a iron rod weighs 23.4 kg then what will be the weight of 6 metres of the same rod?



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4. The length of the shadow of a $3m$ high pole at a certain time the day is $3.6m$. What is the height of another pole whose shadow at that time is $54m$ long?

A. $35m$

B. $37m$

C. $45m$

D. none of these

Answer: C



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Example

1. Suppose a car covers a certain distance at a uniform speed. Then we can say for certain that more is the speed of the car, less is the time taken to cover this distance.

Thus speed varies inversely as the time taken to cover a certain distance.



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2. Suppose a given mass of a gas is subjected to pressure. As the pressure increases, the volume of the gas decreases.

Thus a given mass is subjected to pressure varies inversely as its volume.



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3. If 36 men can finish a piece of work in 35 days, how many days will 15 men take to do it?



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4. A work-force of 420 men with a contractor can finish a certain piece of work in 9 months. How many extra men must he employ to complete the job in 7 months?



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5. A garrison of 500 men had provisions for 24 days. However a reinforcement of 300 men arrived. For how many days will the food last now ?



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6. state true or false. The cost of articles varies directly as the number of articles.

(More articles ,more cost).(Less articles .less cost).



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7. Work done is directly proportional to the number of men working on it.



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Exercise 9 A

1. If 15 oranges ₹ 110, what do 39 Oranges cost ?



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2. If 8 kg sugar costs ₹ 260. how much sugar can be bought for ₹ 877.50?



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3. The cost of 37 m of silk is ₹ 6290. What length of this silk can be purchased for ₹ 4420?



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4. A worker is paid ₹ 1110 for 6 days. If his total wages during a month are ₹ 4625, for how many days he work?



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5. A car cover a distance of 357 km on 42 litres petrol .How far can it travel on 12 litres of petrol ?



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6. Travelling 900 km by rail costs ₹ 2520What would be the fare for a journey of 360 km when a person travles by the same class?



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7. A train covers a distance of 51 km in 45 minutes .How long will take to cover 221 km?



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8. If 22.5 metres of a uniform iron rod weighs 85.5 kg.What will be the length of 22.8 kg of the same rod?



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9. IF weight of 6 paper sheets is 162 grams.how many sheets of the same quality of paper would weight 13.5 kg?



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10. 1152 bars of soap can be packed in 8 cartoons of the same size.How many such cartoon will be required to pack 3888 bars?



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11. If the thickness of a pile of 16 cardboards is 44 mm. how many cardboards will be there in a pile which is 71.5 cm thick ?



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12. At a particular time of a day a 7-m high flagstaff casts a shadow which is 8.2 m long. What is the height of the building which casts a shadow 20.5 metres length at the same moment?





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13. 15 men can build a 16.25 -m- long wall up to a certainj height in one day. How many men should be employed to build a wall of the same height but of length 26 metres in one day?



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14. In a hospital the monthly consumption of milk of 60 patients is 1350 litres .How many

patients can be accommodated in the hospital if the monthly ration of milk is raised to 1710 litres. Assuming that the quota per head remains the same?



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15. The extension in an elastic string varies directly as the weight hung on it. If a weight of 150 g produces an extension of 2.8 cm. What weight would produce an extension of 19.6 cm?



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Exercise 9 B

1. If 48 men can dig a trench 14 days. how long will 28 men take to dig a similar trench ?



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2. 16 men can reap a field in 30 days .How many men must be engaged to reap the same field in 24 days ?



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3. 45 cows can graze a field in 13 days. How many cows will graze the same field in 9 days?



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4. 14 horses can consume a certain quantity of corn in 25 days. In how many days would the same quantity be consumed by 40 horses?



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5. A girl can finish a book in 25 days if she reads 18 pages of it every day. How many days will she take to finish it .If she reads 15 pages every day?



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6. Reeta types 40 words per minute and takes 24 minutes to type a document. Her friend geeta has a typing speed 48 words per minute.

In how much time will she be able to type the same documents?



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7. A bus covers distance in 3 hours 20 minutes at an average speed of 45 km/h. How long will it take to cover the same distance at a speed of 36 km/h ?



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8. At the beginning of a month ,a factory has enough materials to make 240 tonnes of steel in a month.If 60 more tonnes of steel is to be made that month.how long will the materilas last?



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9. A constrator employed 210 men to build a house in 60 days. After 12 days.he was joined by 70 more men. In how many days will the

remaining work be finished?

Hint. 210 men can complete the remaining work in 48 days. Find in how many days 280 men can do it.



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10. A military camp has provisions for 630 men to last for 25 days. How many men must be transferred to another camp so that the food lasts for 30 days?



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11. A group of 120 men had provisions for 200 days. After 5 days, 30 men died due to an epidemic. How long will the remaining food last?



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12. 1200 soldiers in a fort had enough food for 28 days. After 4 days, some soldiers were transferred to another fort and thus the food

lasted now for 32 more days. How many soldiers left the fort?



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Exercise 9 C

1. If 4.5 m of a uniform rod weighs 17.1 kg what is the weight of 12 m of such a rod?

A. 51.2 kg

B. 53 kg

C. 45.6 kg

D. 56 kg

Answer: C



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2. In a map 0.8 cm represents 8.8 km. How much distance will be represented by 80.5 cm?

A. 805 km

B. 855.5 km

C. 644 km

D. non of these

Answer: d



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3. In a race,Raghu covers 5 m in 20 minutes.how much distance will be cover in 50 minutes?

A. 10.5 km

B. 12 km

C. 12.5 km

D. 13.5 km

Answer: C



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4. A garirison of 500 men had provision for 24 days. However a reinforcement of 300 men arrived. The food will last for

A. 18 days

B. $17\frac{1}{2}$ days

C. 16 days

D. 15 days

Answer: c



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5. If $\frac{4}{5}$ of a water tank is filled in 1 hour, how much time will be required to fill the rest of it?

20 minutes (b) 15 minutes 12 minutes (d) 10
minutes

A. 20 seconds

B. 15 seconds

C. 12 seconds

D. 10 seconds

Answer: A



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6. If 21 cows eat as much as 15 buffaloes, how many cows will eat as much as 35 buffaloes?

45 (b) 49 56 (d) 54

A. 49

B. 56

C. 45

D. non of these

Answer: a



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7. A tree 6 m tall casts a shadow of length 4 m. At the same time a flag casts a shadow of length 50 m. Find the length of the pole

A. 50 m

B. 75 m

C. $\frac{33.1}{3}$ m

D. non of these

Answer: b



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8. 8 men can finish a piece of work in 40 days.

If 2 more men join them, the work will be

computed in 30 days (b) 50 days $37\frac{1}{2}$ days (d)

25 days

A. 30 days

B. 50 days

C. 25 days

D. $37\frac{1}{2}$ dayd

Answer: b



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9. If 16 men can reap a field in 30 days.in how many days will 20 men reap the same field?

A. $10\frac{2}{3}$ days

B. 24 days

C. 25 days

D. $37\frac{1}{2}$ days

Answer: b



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10. 10 pipes of the same diameter can fill a tank in 24 minutes. If 2 pipes go out of order, how long will the remaining pipes take to fill the tank?

A. 40 min

B. 45 min

C. 30 min

D. $19\frac{1}{5}$ min

Answer: c



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11. 6 dozen eggs are bought for RS 108, How much will 132 eggs cost?

A. Rs 204

B. Rs 264

C. Rs 184

D. Rs 198

Answer: D



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12. 12 worker take 4 hours to complete a job. How long would it take 15 workers to complete the job?

A. 2 hrs

B. 3.2 hrs

C. 3 .5 hrs

D. 3 hrs

Answer: B



13. A garrison of 500 men had provisions for 27 days. After 3 days a reinforcement of 300 men arrived. For how many more days will the remaining food last now? 15 b. 16 c. 18 d. $17\frac{1}{2}$

A. 15 days

B. 16 days

C. $17\frac{1}{2}$ days

D. 18 days

Answer: C



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14. A rope makes 140 rounds of the circumference of a cylinder. The radius of whose base is 14 cm. How many times can it go round a cylinder with radius 20 cm?

A. 28

B. 17

C. 68

D. 200

Answer: d



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15. A worker makes a toy every $\frac{2}{3}$ hour. If he works for $7\frac{1}{3}$ hours, then how many toys will he make? 12 (b) 16 18 (d) 22

A. 22

B. 18

C. 16

D. 12

Answer: d



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16. 10 men can finish the construction of a wall in 8 days. How many men are added to finish the work in half a day ?

A. 80

B. 100

C. 120

D. 0.625

Answer: d



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Test Paper 9

1. If the cost of 8 toys is Rs 192. What will be the cost of such 14 toys?



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2. A car can cover 270 km in 15 litres of petrol. How many kilometers will it cover in 8 litres of petrol?



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3. If 15 envelopes cost Rs 11.25, what is the cost of such 20 envelopes?



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4. 24 cows can graze a field in 20 days. How many cows can graze it in 15 days?



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5. 8 men can finish a piece of work in 15 hours. In how many hours can 20 men finish it?



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6. If $\frac{4}{5}$ of a cistern is filled in 1 minute, how much time will be required to fill the empty cistern?



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7. A bus covers a certain distance in 20 minutes at an average speed of 45 km per hour. How much time will it take to cover the same distance at a speed of 50 km per hour?



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8. In a fort, 120 men had provisions for 30 days. For how many days is the food sufficient for 100 men?



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9. In a map, 1 cm represents 8 km. How much distance will be represented by 80.5 cm?

A. 640 km

B. 642 km

C. 644 km

D. 648 km

Answer: C



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10. If 16 men can reap a field in 30 days.in how many days will 20 men reap the same field?

A. 14 days

B. 25 days

C. 10days

D. 24days

Answer: D



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11. If 21 cows eat as much as 15 buffaloes. how many cows will eat as much as 35 buffaloes?

A. 45

B. 49

C. 56

D. 54

Answer: b



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12. 45 cows can graze a field in 12 days. How many cows will graze the same field in 9 days?

A. 60 days

B. $38\frac{3}{4}$ days

C. 54 days

D. non of these

Answer: a



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13. 6 dozen eggs are bought for $Rs108$. How much will 108 eggs cost?

A. $Rs171$

B. $Rs162$

C. *Rs*153

D. *Rs*180

Answer: *B*



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14. Fill in the blanks

If 42 men can dig a trench in 14 days, then 1 man can dig it indays.

If 15 oranges cost *Rs* 60, then 12 oranges cost *Rs*.....

If 10 metres of a uniform rod weighs 18 kg. then the weight of 6 metres of the rod is....kg.

If 12 workers finish a piece of work in 4 hours. Then 15 workers will finish it in ...hrs....min.



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15. If 10 pipes of the same diameter can fill a tank in 24 minutes. then 8 pipes would fill in 19 min 20 sec.



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16. If 8 men can finish a piece of work in 40 days. then 10 men can finish it in 32 days.



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17. A tree 6 m tall casts a shadow of length 4 m. At the same time a flag casts a shadow of length 50 m. Find the length of the pole



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18. If a worker takes $\frac{2}{3}$ hour to make a toy, then he will make 12 toys in 8 hours.



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