Chain Rules - Online Quiz

Following quiz provides Multiple Choice Questions (MCQs) related to **Chain Rules**. You will have to read all the given answers and click over the correct answer. If you are not sure about the answer then you can check the answer using **Show Answer** button. You can use **Next Quiz** button to check new set of questions in the quiz.

Q 1 - A rope makes 140 rounds of the circumference of a cylinder, the radius of whose base is 14cm . How many times can it go rounds a cylinder with radius 20 cm?

A - 28

B - 17

C - 98

D - 200

Answer : C

Explanation

Let the required number   of round be x.
More radius , less round   (Indirect)
20: 14: :: 140 : x ⇒ 20x = (14*140) ⇒ x = (14 * 140/20 = 98.
Required number of round = 98.

Show Answer

Q 2 - 16 men can reap a field in 30 days . In how many days will 20 men reap the field?

A - 25 days

B - 24 days

C - 32/3 days

D - 75/2 days

Answer : B

Explanation

Let the required number of days be x.
More men , less days   (Indirect)
20 : 16 :: 30 : x⇒ 20x = (16 *30) ⇒ x = (16*30)/20 =24days.

Q 3 - 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 takes to fill the tank?

A - 40 min

B - 45 min

C - 30 min

D - 96/5 min

Answer : C

Explanation

```
Let the required time be x minutes.
Less pipes, more time     (Indirect)
8: 10 ::24 : x ⇒ 8x = (10 * 24 ) ⇒ x= (10 * 24) /8 = 30min.
```

Q 4 - 8 men can finish a piece of work in 40 days . If 2 more men join with them , then the work will be completed in?

A - 30 days

B - 32 days

C - 36 days

D - 25 days

Answer : B

Explanation

```
Let  10 men finish it in x days.
More men, less days     (Indirect)
10 : 8 :: 40 : x ⇒ 10x = (8 * 40 ) ⇒ x = (8*40) /10 = 32 days.
```

Hide Answer

Q 5 - Two persons can complete a piece of work in 9 days. How many more persons are needed to complete double the work in 12 days?

A - 1

B - 2

C - 3

D - 4

Answer : A

Explanation

```
Let the required number of persons be x .
More work, more  persons          (direct)
More  days  , less persons          (Indirect)
Work      1:2
:: 2 : (2+x)
Days    12:9
 1*12 * ( 2 + x ) = (2 * 9 *2 ) ⇒ ( 2 + x ) = 36/12 = 3 ⇒ x=1.
```

Show Answer

Q 6 - A garrison of 3300 men had provisions for 32 days , when given at the rate of 850 gm per head . At the end of 7 days , a reinforcement arrived and it was found that the provisions would last 17 days more , when given at the rate of 825 gm per head . What was the strength of the reinforcement?

A - 1500

B - 1600

C - 1700

D - 1800

Answer : C

Explanation

```
Let the required strength of reinforcement be x.
3300 men had provisions for (32-7 ) = 25 days.
Less food per head , more persons     (Indirect)
Less days , more persons        (Indirect)
Food per days  825 : 850
:: 3300 : (3300  x )
Days          17 : 25
∴ 825 * 17 * (3300 + x ) = 850 * 25 * 3300
⇒ ( 3300 + x ) = 850 * 25 * 3300/825 * 17 = 5000 ⇒ x = ( 5000 - 3300) = 1700 men.
```

Hide Answer

Q 7 - Running at the same constant rate , 6 identical machines can produce 2700 bottle per minute . At this rate , how many bottles could 10 such machines produce in 4 minutes?

A - 648

B - 1800

C - 2700

D - 10800

Answer : B

Explanation

```
Let the required number  of bottles be x .
More machines, more bottles    ( Direct)
```

```
More time, more bottles      ( Direct)
Machines          6 : 10
:: 2700 : x
Time     1:4
(6 * 1 * x) = 10 * 4 * 2700 ) ⇒ 10 * 4 * 2700 / 6 = 1800 bottles.
```

Show Answer

Q 8 - If the rent for grazing 40 cows for 20 days in Rs 740, how many cows can graze for 30 days on Rs 222?

A - 6

B - 8

C - 5

D - 12

Answer : B

Explanation

```
Let the required  number of   cows be x.
Less rent, less cows      (Direct)
More days, less cows     (Indirect)
Rent  740 : 222
:: 40 : x
Days  30: 20
∴ ( 740 * 30 * x) = ( 222 * 20 * 40 ) ⇒ x = 222* 20 * 40 / 740 * 30 = 8 cows.
```

Hide Answer

Q 9 - If 18 pumps can raise 2170 tonnes of water in 10 days , working 7 hours per day , in how many days will 16 pumps rise 1736 tonnes, working 9 hours per day?

A - 9 days

B - 8 days

C - 7 days

D - 6 days

Answer : C

Explanation

```
Let the required number of days be x.
Less pumps, more days      (Indirect)
Less water, less days       (direct)
More working hrs, less days   (Indirect)
Pumps  16:18
Water Qty.     2170 : 1736          :: 10 :x
Water hrs      9:7
∴ (16 * 2170 * 9 *x ) =   ( 18 * 1736*7 *10)⇒ x=18 * 1736*7 *10/16*2170 * 9 = 7 days .
```

Show Answer

Q 10 - 20 men complete one third of a piece of work in 20 days. How many more men should be employed to finish the rest of the work in 25 more days?

A - 10

B - 12

C - 15

D - 20

Answer : B

Explanation

```
Work done = 1/3, Remaining work = (1- 1/3 ) = 2/3
Let the number of additional men be x.
More work, more men      (Direct)
More days , less men        (Indirect)
Work 1/3 : 2 /3
:: 20 : (20 +x)
Days 25:20
   1/3 * 25 * ( 20 + x) = 2 /3 * 20 *20 ⇒ (20 +x) = 32 ⇒ x=12.
Required number of days  = 12.
```

Show Answer