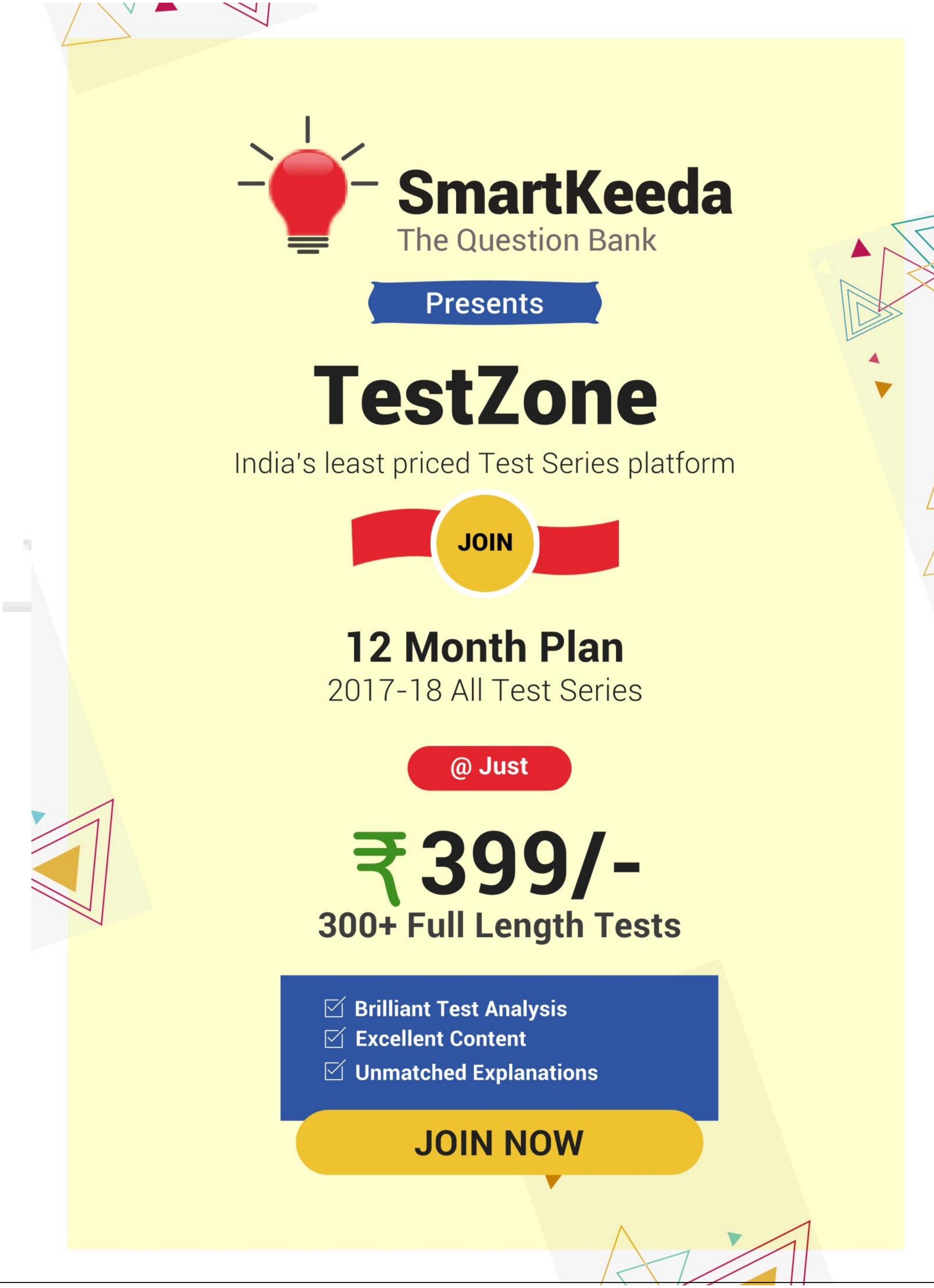

SmartKeeda
The Question Bank
Presents
TestZone
India's least priced Test Series platform
JOIN
12 Month Plan
2017-18 All Test Series
@ Just
₹399/-
300+ Full Length Tests
Brilliant Test Analysis
Excellent Content
Unmatched Explanations
JOIN NOW

# Time and work Questions for CDS, CLAT & SSC Exams.

## Time and work Quiz 9

Directions: Study the following Questions carefully and choose the right answer:

**1. 50 persons can do a work in 12 days, working 6 hours/day. 60 persons can do the same work in 8 days, working x hours per day. The value of x is**

A. 15 B. $7\frac{1}{2}$ C. $5\frac{2}{3}$ D. 5

**2. If 12 men or 18 women can reap a field in 14 days, then working at the same rate, 8 men and 16 women can reap the same field in:**

A. 9 days B. 5 days C. 7 days D. 8 days

**3. A 12 m long road can be dug by 18 men in 20 days. What is length of road can be dug by 12 men in 15 days?**

A. 9 m B. 8 m C. 6 m D. 7 m

**4. 18 boys can do a piece of work in 24 days. In how many days can 27 boys do the same work?**

A. 16 days B. 32 days C. 23 days D. 48 days

**5. A computer can perform 30 identical tasks in 6 hour. At that rate, what is the minimum number of computers that should be assigned to complete 80 of the tasks within 3 hours?**

A. 12 B. 7 C. 6 D. 16

**6. 8 men can complete a piece of work in 20 days. 8 women can complete the same work in 32 days. In how many days will 5 men and 8 women together complete the same work?**

A. 16 days B. 12 days C. 14 days D. 10 days

**7. Some persons can do a piece of work in 12 days. Two times the number of such persons will do half of the work in**

A. 9 days B. 6 days C. 5 days D. 3 days

**8. 2 men and 5 women can do a work in 12 days. 5 men and 2 women can do that work in 9 days. Only 3 women can finish the same work in**

A. 36 days B. 21 days C. 30 days D. 42 days

**9. If 18 binders bind 900 books in 10 days, how many binders will be required to bind 660 books in 12 days?**

A. 22 B. 14 C. 11 D. 8

**10. 4 men and 6 women complete a work in 8 days, 2 men and 9 women also complete in 8 days. The numbers of days 18 women complete the work:**

A. $5\frac{1}{3}$ days B. $5\frac{2}{3}$ days C. $4\frac{2}{3}$ days D. $4\frac{1}{3}$ days

**Correct Answers:**

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| B | A | C | A | C | A | D | A | C | A |

**Explanations:**

**1.** To solve this question, we can apply a short trick approach;
If $M_1$ persons can do a piece of work in $D_1$ days working $H_1$ hours a day and $M_2$ persons can do the same work in $D_2$ days working $H_2$ a day then we have a short-trick formula which is $M_1D_1H_1 = M_2D_2H_2$
Given:
$M_1 = 50$, $D_1 = 12$ days, $H_1 = 6$ hours/day
$M_2 = 60$, $D_2 = 8$ days, $H_2 = ?$
Now, as
$M_1D_1H_1 = M_2D_2H_2$
$50 \times 12 \times 6 = 60 \times 8 \times ?$

$$\Rightarrow ? = \frac{50 \times 12 \times 6}{60 \times 8} = \frac{60}{8}$$

$$= \frac{15}{2} = 7\frac{1}{2} \text{ hours}$$

Hence, option B is correct.

---

**2.** $\because$ 12 men ≡ 18 women
$\therefore$ 2 men ≡ 3 women
$\therefore$ 8 men + 16 women = 28 men
$\therefore$ By $M_1D_1 = M_2D_2$
$\Rightarrow 18 \times 14 = 28 \times D_2$
$$\Rightarrow D_2 = \frac{18 \times 14}{28} = 9 \text{ days}$$

Hence, option A is correct.

---

**3.** To solve this question, we can apply a short trick approach;
If $M_1$ persons can do $W_1$ work in $D_1$ days and $M_2$ persons can do $W_2$ work in $D_2$ days , then we have a short-trick formula which is $M_1D_1W_2 = M_2D_2W_1$
Given:
$M_1 = 18$, $D_1 = 20$ days, $W_1 = 12$ m
$M_2 = 12$, $D_2 = 15$ days, $W_2 = ?$
Now, as
$M_1D_1W_2 = M_2D_2W_1$
$\Rightarrow 18 \times 20 \times ? = 12 \times 15 \times 12$
$$\Rightarrow ? = \frac{12 \times 15 \times 12}{18 \times 20} = 6 \text{ m.}$$
Hence, option C is correct.

**4.** To solve this question, we can apply a short trick approach;

If $M_1$ persons can do a piece of work in $D_1$ days working and $M_2$ persons can do the same work in $D_2$ days then we have formula $M_1D_1= M_2D_2$

Given:

$M_1 = 18$, $D_1= 24$ days, $M_2 = 27$ boys, $D_2 = ?$

Now, as

$M_1D_1= M_2D_2$

$18 \times 24 = 27 \times D_2$

$$\Rightarrow D_2 = \frac{18 \times 24}{27} = 16 \text{ days.}$$

Hence, option A is correct.

**5.** To solve this question, we can apply a short trick approach;

If $M_1$ persons can do $W_1$ work in $H_1$ hours and $M_2$ persons can do $W_2$ work in $H_2$ hours, then we have formula $M_1H_1W_2 = M_2H_2W_1$

Given:

$M_1 = 1$, $H_1 = 6$, $W_1 = 30$

$M_2 = ?$, $H_2 = 3$, $W_2 = 80$

Now, as

$M_1H_1W_2 = M_2H_2W_1$

$1 \times 6 \times 80 = ? \times 3 \times 30$

$$\Rightarrow ? = \frac{1 \times 6 \times 80}{3 \times 30} = \frac{16}{3} = 5\frac{1}{3}$$



we can't have fraction number of computers.

Hence, we can say to complete 80 tasks, there should be 6 computers operating simultaneously.

Hence, option C is correct.

**6.** As per the questions,

$8 \times 20$ men = $8 \times 32$ women

$\therefore$ 5 men = 8 women

Now, 5 men + 8 women = 8 + 8 = 16 women

$\therefore$ $M_1D_1 = M_2D_2$

$\Rightarrow 8 \times 32 = 16 \times D_2$

$$\Rightarrow D_2 = \frac{32 \times 8}{16} = 16 \text{ days}$$

Hence, option A is correct.

**7.** To solve this question, we can apply a short trick approach;
If $M_1$ persons can do $W_1$work in $D_1$ days and $M_2$ persons can do $W_2$ work in $D_2$ days then we have a short-trick formula which is $M_1D_1W_2= M_2D_2W_1$
Given:
$M_1= m$, $M_2 = 2m$, $D_1 = 12$ days, $D_2 = ?$, $W_1 = w$, $W_2 = w/2$
Now, as
$M_1D_1W_2= M_2D_2W_1$

$$m \times 12 \times \frac{w}{2} = 2m \times ? \times w$$

$$\Rightarrow ? = \frac{m \times 6 \times w}{2m \times w}$$

$$\Rightarrow ? = \frac{6}{2} = 3 \text{ days.}$$

Hence, option D is correct.

**8.** As per the questions,
$(2M + 5W) \times 12 \equiv (5M + 2W) \times 9$
$\Rightarrow 24\ M + 60\ W \equiv 45\ M + 18\ W$
$\Rightarrow 42\ W \equiv 21\ M$
$\Rightarrow 2W \equiv 1M$
$\therefore\ 2M + 5W \equiv 9W$
$\therefore\ M_1D_1 = M_2D_2$
$\Rightarrow\ 9 \times 12 = 3 \times D_2$
$\Rightarrow D_2 = \frac{9 \times 12}{3} = 36$ days

Hence, option A is correct.

**9.** To solve this question, we can apply a short trick approach
$M_1D_1W_2 = M_2D_2W_1$
Given,
$M_1 = 18$, $D_1 = 10$ days, $W_1 = 900$, $M_2 = ?$, $D_2 = 12$ days, $W_2 = 660$
By the short trick approach, we get
$18 \times 10 \times 660 = M_2 \times 12 \times 900$

$$\therefore\quad M_2 = \frac{660 \times 10 \times 18}{900 \times 12} = 11 \text{ binders.}$$

Hence, option C is correct.

**10.** $4\ m + 6\ w \equiv 2\ m + 9\ w$

$2m \equiv 3w$

So, $4m + 6\ w \equiv 12w$

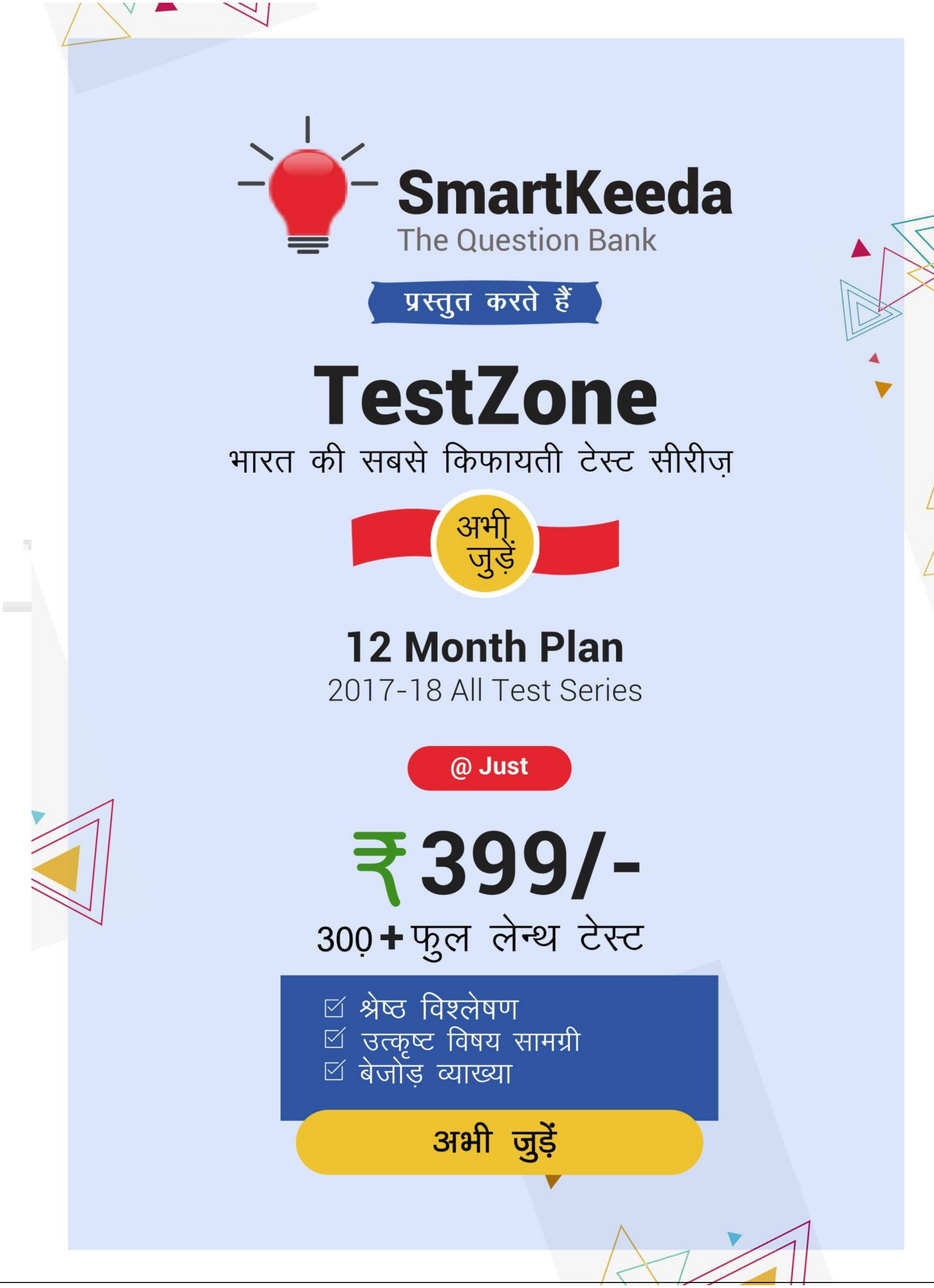
12 w $\rightarrow$ 8 days

18 w $\rightarrow$ x days

By cross multiplication, we get

$\therefore\ x = \frac{12 \times 8}{18} = \frac{16}{3} = 5\frac{1}{3}$ days

Hence, option A is correct.


SmartKeeda
The Question Bank
प्रस्तुत करते हैं
TestZone
भारत की सबसे किफायती टेस्ट सीरीज़
अभी जुड़ें
12 Month Plan
2017-18 All Test Series
@ Just
₹399/-
300+ फुल लेन्थ टेस्ट
श्रेष्ठ विश्लेषण
उत्कृष्ट विषय सामग्री
बेजोड़ व्याख्या
अभी जुड़ें