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Problems on Ages Questions for SBI PO Pre, IBPS PO Pre, SBI Clerk Mains and IBPS Clerk Mains Exams.

Problems on Ages Quiz 4

Directions: Kindly study the following Questions carefully and choose the right answer:

1. The sum of the ages of Kidambi and Srikanth 14 years hence will be equal to 2 times their present age. If at present Kidambi is 8 years elder to Srikanth, then what are their present ages?

A. 22, 8   B. 29, 12   C. 18, 10   D. 13, 6   E. None of these

2. A family consists of paternal grandparents, parents and three grandchildren. The average age of the grandparents is 70 years, that of the parents is 40 years and that of the grandchildren is 10 years. What is the average age of the family?

A. $34\frac{4}{7}$ years   B. $35\frac{5}{7}$ years   C. $32\frac{1}{7}$ years   D. $37\frac{1}{2}$ years   E. None of these

3. Mayank said to his friend "If you subtract 18 from my age the two digits of my age will reverse their positions. Also my age is six less than 8 times the sum of digits of my age". Find Mayank's age.

A. 46 years   B. 37 years   C. 56 years   D. 50 years   E. 42 years

4. If the average age of a class is 15 (including the age of the teacher); that of the boys is 10 and if the age of the teacher is 13 more than the average age of the girls , then what is the average age of the girls, given that the number of boys and girls is the same?

A. 11   B. 12   C. 13   D. 16   E. Can't be determined

5. There are three Pathan brothers Yusuf Pathan, Irfan Pathan and Saddam Pathan. The sum of the squares of the their ages (in completed years) is 325. If the product of their ages does not exceed 1000, find the age (in years) of the youngest brother.

A. 6   B. 7   C. 8   D. 9   E. None of these

6. The average age of a family of five members is 20 years. If the age of the youngest member is 10 years as of now, what was the average age of the family just a day before the birth of the youngest member? Assume that no other members have been added to or removed from this family in this period?

A. 15 years   B. 12.5 years   C. 16 years   D. 11 years   E. None of these

7. If 6 years is subtracted from the present age of Randheer and the remainder is divided by 18, then the present age of his grandson Anup is obtained, If Anup is 2 year younger than Mahesh whose age is 5 Years, then what is the age of Randheer?

A. 96 years   B. 84 years   C. 48 years   D. 60 years   E. None of these

8. Average age of a class of 30 students is 13 years. The average age of a group of 9 students is 12 years and the average age of another group of 10 students is 14 years. What is the average age of the rest of the students?

A. 14.91 years   B. 13 years   C. 13.91 years   D. 16.91 years   E. 12.91 years

9. The ratio of the age of 3 family members is 9 : 7 : 1 in 2001. In 2005 a new baby was born in the family and in 2009 the average becomes 24. Find the age of the oldest person in 2001.

A. 24 years   B. 45 years   C. 27 years   D. 30 years   E. 36 years

10. 19 years ago, the average age of a woman and her daughter was 47.5 years. At present, two times of the woman's age is equal to five times of the daughter's age. 19 years hence, what will be the age of daughter?

A. 38 years   B. 34 years   C. 57 years   D. 51 years   E. None fo these

Correct Answers:

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

Explanations:

1. Let the present ages of Kidambi and Srikanth be x years and y years respectively.

As per the question,

(x + 14) + (y + 14) = 2(x + y)

x + y + 28 = 2x + 2y

x + y = 28   .....(i)

Also,

y + 8 = x

x − y = 8   .....(ii)

Solving eqns (i) and (ii), we get

x = 18 and y = 10

Therefore, Present ages of Kidambi and Srikanth is 18 years and 10 years respectively

Hence, option C is correct.

2. The family consists of grandparents, parents and three grandchildren.

So, the number of family members = 2 + 2 + 3 = 7

We know,

$$\text{Average of quantities} = \frac{\text{Sum of all quantities}}{\text{No. of quantities}}$$

The average age of the grandparents is 70 years. So, the total age of the grandparents = 70 × 2 = 140 years

The average age of the parents is 40 years. So, the total age of the parents = 40 × 2 = 80 years

The average age of the grandchildren is 10 years. So, the total age of the grandchildren = 10 × 3 = 30 years

∴ The total age of the family members = 140 + 80 + 30 = 250 years.

∴ The average age of the family = $\dfrac{250}{7}$ = $35\dfrac{5}{7}$ years

Hence, option B is correct.

3.   Age by reversing the digits = (10y + x) yrs

Now, 10x + y − 18= 10y + x

9x − 9y = 18

x − y = 2..................(1)

Also,

10x + y = 8(x + y) − 6

2x − 7y = −6............. (2)

Solving equations (1) and (2),

x = 4 , y = 2

Therefore, Mayank's age = 10x + y = 10(4) + 2 = 42 years

Hence, option E is correct.

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4.   Let the number of boys = the number of girls = n

Hence, total age of boys = 10n

Let the average age of girls = x

Hence, total age of girls = nx

Total age of the class = 10n + nx + x + 13

Total number of people in the class = n + n + 1 = 2n + 1

Average age of the class = $\dfrac{(10n + nx + x + 13)}{(2n + 1)}$ = 15

Since this is a single linear equation in two variables, a unique solution can't be found.

Therefore, the average age of the girls cannot be determined.

Hence, option E is correct.
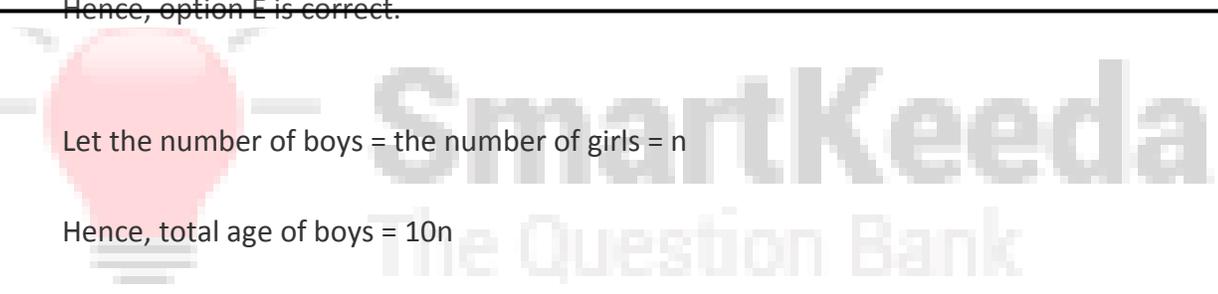
5. Let the ages of the 3 brothers in completed years be x, y, z.

$$x^2 + y^2 + z^2 = 325 \qquad \text{.......(i)}$$

Clearly, the three numbers have to be less than 18 since the square of 18 itself is 324.

By trial, we see that $325 = 15^2 + 8^2 + 6^2$ or $12^2 + 10^2 + 9^2$

As the product of the ages is less than 1000, the ages have to be 6, 8, 15

The youngest is 6.

Hence correct option (A) is correct.

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6. At present, total age of the family = 5 × 20 = 100 years

Since the youngest member is currently 10 years old, one day before the birth of the youngest member means 10 years ago.

∴ Total age of the family one day before the birth of the youngest member = [100 − (10 × 5)] = 50

Now, we must consider only 4 members since the youngest one isn't born yet (at this point of time)

∴ Required average age = $\dfrac{50}{4}$ = 12.5 years

Hence, option B is correct.

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7. Mahesh's present age = 5 years

Anup's present age = 5 − 2 = 3 years

Let present age of Randheer be x.

Then, $\dfrac{x-6}{18}$ = Anup's present age

Now, according to the question.

$$\dfrac{x-6}{18} = 3$$

$\Rightarrow$ x − 6 = 54

$\Rightarrow$ x = 54 + 6 = 60 years

Hence, option (D) is correct.

8. We know that

$$\text{Average} = \frac{\text{Sum of all quantities}}{\text{Total number of quantities}}$$

∴ Sum of ages of students = Average × number of students

The average age of 30 students is 13

∴ Sum of ages of 30 students = Average × number of students

⇒ Sum of ages of 30 students = 30 × 13 = 390 years

Average age of group of 9 students is 12.

⇒ Sum of ages of 9 students = 12 × 9 = 108 years

Average age of group of 10 students is 14.

⇒ Sum of ages of 10 students = 14 × 10 = 140 years

Let the number of remaining students be x

∴ x + 9 + 10 = 30

⇒ x + 19 = 30

⇒ x = 11 students

∴ Sum of ages of 11 students = (Sum of ages of 30 students) − (Sum of ages of 9 students + Sum of ages of 10 students)

⇒ Sum of age of 11 students = 390 − (108 + 140) = 390 − 248 = 142 years

∴ Average age of 11 students = $\dfrac{\text{Sum of ages of 11 students}}{11}$

⇒ Average age of 11 students = $\dfrac{142}{11}$ = 12.91

∴ Average age of remaining students in 12.91 years

Hence option E is correct.

9. According to the question,

9x + 7x + x + 3 × 8 + 4 = 24 × 4

17x + 24 + 4 = 96

17x = 96 − 28

17x = 68

x = 4

Age of the oldest person = 9 × 4 = 36 years

Hence, option E is correct.

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10. 19 years ago, let woman's age = x years and daughter's age = y years

Then, x + y = 47.5 × 2 = 95 years, -------- (i)

At present, the age of woman = x + 19 years and the age of daughter = y + 19 years

According to the question, 2(x + 19) = 5(y + 19)

2x − 5y = 95 − 38 = 57 ------- (i)

Equation (i) × 5 + (ii)

7x = 475 + 57 = 532

x = 76

19 years ago, daughter's age = 95 − x = 95 − 76 = 19 years

At present, daughter's age = 19 + 19 = 38 years,

19 years hence, daughter's age = 38 + 19 = 57 years

Hence, option C is correct.