

Exercise 8C

Q13

# Answer:

(c) 80

# Let the number be x.

$$\therefore \frac{4}{5}x = \frac{3}{4}x + 4$$

$$\Rightarrow \frac{4x}{5} = \frac{3x+16}{4}$$

$$\Rightarrow 16x = 15x + 80$$

$$\Rightarrow 16x - 15x = 80$$

$$\Rightarrow x = 80$$

Q14

## Answer:

(b) 28 years

Let x be the common multiple of the ages of A and B.

Then, the ages of A and B would be 5x and 7x, respectively.

$$\therefore \frac{5x+4}{7x+4} = \frac{3}{4}$$

$$\Rightarrow 4\left(5x+4\right) = 3\left(7x+4\right)$$

$$\Rightarrow 20x+16 = 21x+12$$

$$\Rightarrow 16-12 = 21x-20x$$

$$\Rightarrow 4 = x$$

$$\Rightarrow x = 4$$

$$\therefore \text{ Age of } B = 7\left(x\right) = 7 \times 4$$

$$= 28 \text{ years}$$

### Q15

#### Answer:

(b) 5 cm

Let the equal side of the isosceles triangle be x.

Then, the perimeter of the triangle would be (x + x + 6).

$$\therefore 2x + 6 = 16$$

$$\Rightarrow 2x = 16 - 6$$

$$\Rightarrow 2x = 10$$

$$\Rightarrow x = \frac{10}{2} = 5$$

:. Length of each equal side = 5 cm

## Q16

#### Answer:

(d) 17

Let the three consecutive integers be x, x+1 and x+2.

Equation = x + x + 1 + x + 2 = 51

$$\Rightarrow 3x + 3 = 51$$

$$\Rightarrow 3x = 51 - 3$$

$$\Rightarrow 3x = 48$$

$$\Rightarrow x = \frac{48}{3} = 16$$

Middle integer = x + 1 = 16 + 1 = 17

Q17

Answer:

(a) 40

Let the numbers be x and x + 15.

$$\therefore x + x + 15 = 95$$

$$\Rightarrow 2x + 15 = 95$$

$$\Rightarrow 2x = 95 - 15$$

$$\Rightarrow 2x = 80$$

$$\Rightarrow x = 40$$

The smaller number is 40.

Q18

Answer:

(c) 48

Let the number of boys in the class be x. Then, the number of girls will be (x-8).

The equation becomes:

$$\frac{x}{x-8} = \frac{7}{5}$$

$$\Rightarrow 5x = 7x - 56$$

$$\Rightarrow 5x - 7x = -56$$

$$\Rightarrow -2x = -56$$

$$\Rightarrow x = \frac{-56}{-2} = 28$$

Therefore, the number of boys is 28.

Number of girls = (x - 8) = 28 - 8 = 20

Total strength of the class = 28 + 20 = 48

\*\*\*\*\*\*\* END \*\*\*\*\*\*\*