

1- If $a : b = 5 : 9$ and $b : c = 4 : 7$, find $a : b : c$?

- **A.**20:36:63
- **B.**20:63:36
- **C.**63:20:36
- **D.**36:63:20
- **E.**None of these

Answer & Explanation

Answer - **A** (20:36:63)

Explanation - $a:b=5:9$ and $b:c=4:7$

$$= (4 \times 9/4) : (7 \times 9/4) = 9 : 63/4$$

$$a:b:c = 5:9:63/4 = 20:36:63$$

2- Find the fourth proportional to 4, 9, 12?

- **A.**24
- **B.**21
- **C.**27
- **D.**36
- **E.**None of these

Answer & Explanation

Answer - **C** (27)

Explanation - Let the fourth proportional to 4, 9, 12 be a.

Then, $4 : 9 :: 12 : a$

$$4a = 9 \times 12$$

$$a = (9 \times 12)/4 = 27;$$

Fourth proportional to 4, 9, 12 is 27

3- If $x : y = 3 : 4$, find $(4x + 5y) : (5x - 2y)$?

- **A.**23/7
- **B.**32/7
- **C.**23/7
- **D.**21/6

- **E.**None of these

Answer & Explanation

Answer - **B** (32/7)

Explanation - $x/y=3/4$

$$(4x+5y)/(5x+2y) = (4(x/y)+5)/(5(x/y)-2)$$

$$=(4(3/4)+5)/(5(3/4)-2)$$

$$=(3+5)/(7/4)=32/7$$

4- Divide Rs. 672 in the ratio 5 : 3?

- **A.**420 and 252
- **B.**410 and 246
- **C.**400 and 240
- **D.**440 and 264
- **E.**None of these

Answer & Explanation

Answer - **A** (420 and 252)

Explanation - Sum of ratio terms = $(5 + 3) = 8$.

First part = Rs. $(672 \times (5/8)) = \text{Rs. } 420$;

Second part = Rs. $(672 \times (3/8)) = \text{Rs. } 252$

5- Divide Rs. 1162 among A, B, C in the ratio 35 : 28 : 20?

- **A.**480 , 382 and 300
- **B.**490 , 280 and 382
- **C.**490 , 392 and 280
- **D.**392 , 490 and 280
- **E.**None of these

Answer & Explanation

Answer - **C** (490 , 392 and 280)

Explanation - Sum of ratio terms = $(35 + 28 + 20) = 83$.

A's share = Rs. $(1162 \times (35/83)) = \text{Rs. } 490$;

B's share = Rs. $(1162 \times (28/83)) = \text{Rs. } 392$;

C's share = Rs. $(1162 \times (20/83)) = \text{Rs. } 280$

6- A bag contains 50 p, 25 p and 10 p coins in the ratio 5: 9: 4, amounting to Rs. 206. Find the number of coins of 25 paise type?

- **A.200**
- **B.360**
- **C.160**
- **D.320**
- **E.None of these**

Answer & Explanation

Answer - **B** (360)

Explanation - Let the number of 50 p, 25 P and 10 p coins be $5x$, $9x$ and $4x$ respectively.

$$(5x/2) + (9x/4) + (4x/10) = 206$$

$$50x + 45x + 8x = 4120$$

$$103x = 4120$$

$$x = 40.$$

Number of 50 p coins = $(5 \times 40) = 200$;

Number of 25 p coins = $(9 \times 40) = 360$;

Number of 10 p coins = $(4 \times 40) = 160$.

7- A mixture contains alcohol and water in the ratio 4 : 3. If 5 litres of water is added to the mixture, the ratio becomes 4: 5. Find the quantity of alcohol in the given mixture?

- **A.10**
- **B.12**
- **C.15**
- **D.18**
- **E.None of these**

Answer & Explanation

Answer - A (10)

Explanation - Let the quantity of alcohol and water be $4x$ litres and $3x$ litres respectively

$$4x/(3x+5)=4/5$$

$$20x=4(3x+5)$$

$$8x=20$$

$$x=2.5$$

Quantity of alcohol = (4×2.5) litres = 10 litres