

1. **(A) diminish**

distend means to expand or stretch or swell. Hence the opposite meaning is diminish.

2. **(D) economy**

frugal means saving, not wasteful.

3. **(C) stoic: perturbed**

Buoyant: submerged (two different form of presence of body in water)

Obloquy: discredit (same meaning)

Stoic (unaffected by pleasure or pain or impassive): perturbed (to disturb greatly, make uneasy or anxious (both are two types of negative emotion)

Stealth: furtive (same meaning, stolen)

Disaffected: rebel (same meaning, disloyal)

4. **(A) somewhat nondescript, easily recognized**

Common sense tells you that the markings described in the sentence — black bib, gray cap, and white lines trailing down from the mouth — would make a bird distinctive and readily identifiable. In the sentence, the connecting word *while* neatly sets up contrasting ideas as between what precedes it and what follows it. The word *nondescript* and the phrase *easily recognized* make for just the sort of contrast that lends coherence to the sentence as a whole.

5. **(C) 10**

If S is set of children who eat spinach, B is set of children who eat bean and C is the set of children, who eat carrot then,

$$n(S') = 7, n(C') = 6, n(B') = 5$$

$$\text{Again } n(S' \cap C') = 4, n(C' \cap B') = 3, n(B' \cap S') = 2 \text{ and } n(S' \cap C' \cap B') = 1,$$

Thus, Total number of children=

$$n(S' \cup C' \cup B') = n(S') + n(C') + n(B') - \{n(S' \cap C') + n(C' \cap B') + n(B' \cap S')\} + n(S' \cap C' \cap B')$$

$$= 7 + 6 + 5 - (4 + 3 + 2) + 1 = 10$$

6. **(A) Honeybees, unlike many other varieties of bees, are able to live through the winter by clustering together in a dense ball for body warmth.**

Main ideas are, unlike other bees, honey bees form cluster in winter to gain body warmth for survival. The numbers, how they eat, how they move are secondary ideas according to the passage.

7. **(A) 46**

Escalator is moving with its usual speed, addition to which the person steps down. Now let us calculate the speed of escalator in terms of number of steps elapsed at bottom. Let in 1 sec number of steps elapsed is x . In 30 sec, number of steps elapsed is $30x$ and in 18 sec is $18x$. Addition to this the man has stepped down in order to reach earlier compared to normal case. Thus total number of steps elapsed in both the case is same as speed of escalator is constant. Hence according to question, $26 + 30x = 34 + 18x \Rightarrow x = 2/3$ steps

Thus required number of steps = $26 + 30x = 46$ steps.

8. **(D) 5:8**

In 1 lt of mixture, amount of milk in vessel A = $2/5$ and in vessel B = $9/16$

To make $1/2$ lt milk in vessel C, we need from vessel A, $1/2 - 2/5 = 1/10$ lt

And from vessel B, $9/16 - 1/2 = 1/16$ lt.

Thus the ratio = $1/16 : 1/10 = 5:8$

9. **(C) 15 hours**

Let 1st pipe fills the tank in x hrs, 2nd pipe in y hrs and 3rd in z hrs.

Then in 1 hr 1st pipe fills $(1/x)$ th of tank, 2nd pipe fills $(1/y)$ th of tank and 3rd pipe fills $(1/z)$ th of the tank.

As time taken by 1st and 2nd pipe simultaneously to fill the tank = time taken by 3rd pipe to fill the tank. Hence in 1 hr the portion of tank filled by 1st and 2nd pipe simultaneously is equal that by 3rd pipe.

Thus $1/x + 1/y = 1/z$.

Again, $x = y + 5$ and $z = y - 4$.

From above 3 equations, we get $y^2 - 8y - 20 = 0$. Solving this, $y = 10$ or -2 .

Hence $y = 10$ hrs, $x = 15$ hrs

10. **(C) 6**

unit's digit in the product of $37562^{156!}$ and $67847^{675!}$ = unit's digit in the product of $2^{156!}$ and $7^{675!}$

The unit digit for any power of 2 is one of the numbers, 2, 4, 8, 6. If n is a positive number then unit digit of $2^{4n} = 6$, $2^{4n+1} = 2$, $2^{4n+2} = 4$, $2^{4n+3} = 8$.

$156! = 4 \times (1 \times 2 \times 3 \times 5 \times \dots \times 156)$. Hence unit digit of $2^{156!} = 6$.

Similarly $675! = 4 \times (1 \times 2 \times 3 \times 5 \times \dots \times 675)$. 7^{4n} gives unit digit 1. Try it.

Thus the the unit's digit in the product of $37562^{156!}$ and $67847^{675!}$ is $6 \times 1 = 6$