

13. Evaluate the expression

$$\begin{vmatrix} a & 0 & b \\ 0 & 1 & 0 \\ b & 0 & a \end{vmatrix} - \begin{vmatrix} a & 2 & -b \\ 0 & 1 & a \\ b & 0 & a \end{vmatrix}$$

- (1)  $\frac{a+b}{a-b}$       (3)  $\frac{a^2 - b^2}{a^2 + 2ab + b^2}$       (5) 1  
 (2)  $\frac{a^2 - b^2}{a^2 + b^2}$       (4)  $\frac{a-b}{a^2 + ab + b^2}$

14. Solve for  $x$  and  $y$ :

$$4(12x - 13y + 4) = 5(6x + 5y - 5)$$

$$3(3x + 2y + 6) = 2(8x - y + 6)$$

the value of  $x$  lies in the range

- (1)  $-2 \leq x < 0$ .      (3)  $2 \leq x < 4$ .      (5)  $6 \leq x < 8$ .  
 (2)  $0 \leq x < 2$ .      (4)  $4 \leq x < 6$ .

15. The value of  $y$  in Question 14 lies in the range

- (1)  $-2 \leq y < 0$ .      (3)  $2 \leq y < 4$ .      (5)  $6 \leq y < 8$ .  
 (2)  $0 \leq y < 2$ .      (4)  $4 \leq y < 6$ .

16. Solve for  $x$  and  $y$ :

$$11(10y - 60x) = -30(68 + 2x + 5y)$$

$$2(24 - 96x - 48y) = -35(18 - x + 6y)$$

The value of  $x$  lies in the range (Choose your answer from the choices given for Question 14.).17. The value of  $y$  in Question 16 lies in the range (Choose your answer from the choices given for Question 15.).