

EduSahara™ Learning Center Assignment**Grade : Class X, ICSE****Chapter : Matrices****Name : Matrix Multiplication**

1. If $A = \begin{bmatrix} 9 & -3 \\ 7 & 8 \end{bmatrix}$ and $B = \begin{bmatrix} 0 & -1 \\ -3 & 3 \end{bmatrix}$, then $A \times B =$

(i) $\begin{bmatrix} 9 & -18 \\ -22 & 17 \end{bmatrix}$ (ii) $\begin{bmatrix} 9 & -19 \\ -24 & 17 \end{bmatrix}$ (iii) $\begin{bmatrix} 9 & -18 \\ -24 & 17 \end{bmatrix}$

(iv) $\begin{bmatrix} 9 & -17 \\ -24 & 17 \end{bmatrix}$ (v) $\begin{bmatrix} 9 & -18 \\ -24 & 15 \end{bmatrix}$

2. Which of the following is an identity matrix ?

(i) $\begin{bmatrix} 1 & 0 \\ 0 & 0 \end{bmatrix}$ (ii) $\begin{bmatrix} 2 & 0 \\ 0 & 1 \end{bmatrix}$ (iii) $\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$

(iv) $\begin{bmatrix} -1 & 0 \\ 0 & 1 \end{bmatrix}$ (v) $\begin{bmatrix} 1 & 2 \\ 0 & 1 \end{bmatrix}$

3. If $A = \begin{bmatrix} 1 & 2 & 1 \\ -1 & 1 & -1 \\ 2 & 1 & 3 \end{bmatrix}$ and $B = \begin{bmatrix} 2 & -1 & 3 \\ 3 & 3 & -1 \\ 2 & -2 & -2 \end{bmatrix}$, then $A \times B =$

(i) $\begin{bmatrix} 10 & 3 & -1 \\ -1 & 6 & -2 \\ 15 & -5 & -1 \end{bmatrix}$ (ii) $\begin{bmatrix} 10 & 3 & -1 \\ -1 & 6 & -2 \\ 13 & -7 & -1 \end{bmatrix}$ (iii) $\begin{bmatrix} 10 & 3 & -1 \\ 0 & 6 & -2 \\ 13 & -5 & -1 \end{bmatrix}$

(iv) $\begin{bmatrix} 10 & 3 & -1 \\ -1 & 6 & -2 \\ 13 & -5 & -2 \end{bmatrix}$ (v) $\begin{bmatrix} 10 & 3 & -1 \\ -1 & 6 & -2 \\ 13 & -5 & -1 \end{bmatrix}$

4. If $A = \begin{bmatrix} -2 & -1 & 0 \\ 0 & -2 & 0 \end{bmatrix}$ and $B = \begin{bmatrix} -1 & -2 \\ -1 & -2 \\ -2 & 1 \end{bmatrix}$, then $A \times B =$

(i) $\begin{bmatrix} 2 & 5 & 0 \\ 2 & 5 & 0 \end{bmatrix}$ (ii) $\begin{bmatrix} 6 & 6 \\ 2 & 4 \end{bmatrix}$ (iii) $\begin{bmatrix} 2 & 2 & 4 \\ 5 & 5 & 0 \end{bmatrix}$

4 0 0

0 0 0

$$(iv) \begin{bmatrix} 3 & 6 \\ 2 & 2 \end{bmatrix} \quad (v) \begin{bmatrix} 3 & 6 \\ 2 & 4 \end{bmatrix}$$

5. If $A = \begin{bmatrix} 0 & -4 & -4 \\ -3 & -1 & 4 \\ -4 & -4 & 2 \end{bmatrix}$, then $A^2 =$

$$(i) \begin{bmatrix} 28 & 20 & -24 \\ -13 & -4 & 16 \\ 4 & 12 & 4 \end{bmatrix} \quad (ii) \begin{bmatrix} 28 & 20 & -24 \\ -13 & -3 & 16 \\ 4 & 12 & 6 \end{bmatrix} \quad (iii) \begin{bmatrix} 28 & 20 & -24 \\ -13 & -3 & 16 \\ 4 & 12 & 4 \end{bmatrix}$$

$$(iv) \begin{bmatrix} 28 & 21 & -24 \\ -13 & -3 & 16 \\ 4 & 12 & 4 \end{bmatrix} \quad (v) \begin{bmatrix} 28 & 20 & -24 \\ -13 & -3 & 16 \\ 4 & 9 & 4 \end{bmatrix}$$

6. If $A = \begin{bmatrix} -3 & 2 & 4 \\ -4 & 4 & 3 \\ -2 & 2 & 3 \end{bmatrix}$, then $4A =$

$$(i) \begin{bmatrix} -12 & 8 & 16 \\ -16 & 16 & 12 \\ -8 & 8 & 12 \end{bmatrix} \quad (ii) \begin{bmatrix} -12 & 8 & 16 \\ -16 & 16 & 12 \\ -10 & 8 & 12 \end{bmatrix} \quad (iii) \begin{bmatrix} -12 & 9 & 16 \\ -16 & 16 & 12 \\ -8 & 8 & 12 \end{bmatrix}$$

$$(iv) \begin{bmatrix} -12 & 8 & 16 \\ -13 & 16 & 12 \\ -8 & 8 & 12 \end{bmatrix} \quad (v) \begin{bmatrix} -12 & 7 & 16 \\ -16 & 16 & 12 \\ -8 & 8 & 12 \end{bmatrix}$$

7. If $A = \begin{bmatrix} -2 & -2 \\ -1 & 0 \end{bmatrix}$, $B = \begin{bmatrix} -2 & 1 \\ 0 & 1 \end{bmatrix}$ and $C = \begin{bmatrix} -2 & 2 \\ 1 & -2 \end{bmatrix}$,

then $(A \times B) \times C =$

$$(i) \begin{bmatrix} -12 & 15 \\ -5 & 6 \end{bmatrix} \quad (ii) \begin{bmatrix} -12 & 13 \\ -5 & 6 \end{bmatrix} \quad (iii) \begin{bmatrix} -12 & 17 \\ -5 & 6 \end{bmatrix}$$

$$(iv) \begin{bmatrix} -12 & 16 \\ -5 & 6 \end{bmatrix} \quad (v) \begin{bmatrix} -12 & 16 \\ -5 & 9 \end{bmatrix}$$

8. If $A =$, $B =$ and $C =$,

$$\begin{bmatrix} -1 & -1 \\ -1 & -1 \end{bmatrix} \quad \begin{bmatrix} 1 & 0 \\ -1 & -2 \end{bmatrix} \quad \begin{bmatrix} -2 & 1 \\ 2 & 0 \end{bmatrix}$$

then $(A \times B) + C =$

(i) $\begin{bmatrix} 1 & 3 \\ 2 & 2 \end{bmatrix}$ (ii) $\begin{bmatrix} -2 & 2 \\ 2 & 2 \end{bmatrix}$ (iii) $\begin{bmatrix} -1 & 3 \\ 2 & 2 \end{bmatrix}$

(iv) $\begin{bmatrix} -2 & 3 \\ -1 & 2 \end{bmatrix}$ (v) $\begin{bmatrix} -2 & 3 \\ 2 & 2 \end{bmatrix}$

9. If $A = \begin{bmatrix} 1 & -2 \\ 1 & -1 \end{bmatrix}$, $B = \begin{bmatrix} 1 & -2 \\ 0 & -1 \end{bmatrix}$ and $C = \begin{bmatrix} 2 & -2 \\ 2 & 0 \end{bmatrix}$,

then $A \times (B + C) =$

(i) $\begin{bmatrix} -1 & -2 \\ 1 & -3 \end{bmatrix}$ (ii) $\begin{bmatrix} -1 & 0 \\ 1 & -3 \end{bmatrix}$ (iii) $\begin{bmatrix} -1 & -2 \\ 1 & -2 \end{bmatrix}$

(iv) $\begin{bmatrix} -1 & -5 \\ 1 & -3 \end{bmatrix}$ (v) $\begin{bmatrix} -1 & -2 \\ 1 & -4 \end{bmatrix}$

10. If $A = \begin{bmatrix} 4 & -1 \\ -7 & -9 \end{bmatrix}$ and $C = \begin{bmatrix} 14 & -11 & -27 \\ 40 & 73 & 101 \end{bmatrix}$,

find a matrix B satisfying $A \times B = C$

(i) $\begin{bmatrix} 2 & -4 & -8 \\ -6 & -5 & -5 \end{bmatrix}$ (ii) $\begin{bmatrix} 2 & -5 & -8 \\ -6 & -5 & -5 \end{bmatrix}$ (iii) $\begin{bmatrix} 4 & -4 & -8 \\ -6 & -5 & -5 \end{bmatrix}$

(iv) $\begin{bmatrix} 2 & -4 & -7 \\ -6 & -5 & -5 \end{bmatrix}$ (v) $\begin{bmatrix} 2 & -4 & -10 \\ -6 & -5 & -5 \end{bmatrix}$

11. If $A = \begin{bmatrix} -1 & -2 \\ 0 & -1 \end{bmatrix}$, $B = \begin{bmatrix} -1 & 1 \\ -1 & 1 \end{bmatrix}$ and $C = \begin{bmatrix} 2 \\ 1 \end{bmatrix}$,

then compute the product $(A \times B) \times C =$

(i) $\begin{bmatrix} 3 \\ -1 \end{bmatrix}$ (ii) $\begin{bmatrix} 3 \\ 1 \end{bmatrix}$ (iii) $\begin{bmatrix} 3 \\ 2 \end{bmatrix}$

(iv) $\begin{bmatrix} 5 \\ 1 \end{bmatrix}$ (v) $\begin{bmatrix} 3 \\ 0 \end{bmatrix}$

12. If $A = \begin{bmatrix} 6 & -6 \\ 0 & 9 \end{bmatrix}$, $B = \begin{bmatrix} 0 & -9 \\ 5 & 9 \end{bmatrix}$ and $C = \begin{bmatrix} -4 & 8 \\ 2 & 0 \end{bmatrix}$,

then compute $A^2 + BC =$

(i) $\begin{bmatrix} 18 & -90 \\ -2 & 122 \end{bmatrix}$ (ii) $\begin{bmatrix} 18 & -90 \\ -2 & 121 \end{bmatrix}$ (iii) $\begin{bmatrix} 18 & -90 \\ -2 & 120 \end{bmatrix}$

(iv) $\begin{bmatrix} 18 & -90 \\ -4 & 121 \end{bmatrix}$ (v) $\begin{bmatrix} 20 & -90 \\ -2 & 121 \end{bmatrix}$

13. If $A = \begin{bmatrix} 0 & 2 \\ 4 & 2 \end{bmatrix}$, then find AI

(i) $\begin{bmatrix} 0 & 2 \\ 4 & 3 \end{bmatrix}$ (ii) $\begin{bmatrix} 0 & 2 \\ 7 & 2 \end{bmatrix}$ (iii) $\begin{bmatrix} 0 & 2 \\ 3 & 2 \end{bmatrix}$

(iv) $\begin{bmatrix} 0 & 2 \\ 4 & 2 \end{bmatrix}$ (v) $\begin{bmatrix} 0 & 2 \\ 1 & 2 \end{bmatrix}$

14. If $A = \begin{bmatrix} 4 & 3 \\ 3 & -6 \end{bmatrix}$, then find B satisfying $A \times B = A$

(i) $\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$ (ii) $\begin{bmatrix} 1 & 0 \\ -3 & 1 \end{bmatrix}$ (iii) $\begin{bmatrix} 1 & 0 \\ -1 & 1 \end{bmatrix}$

(iv) $\begin{bmatrix} 1 & 0 \\ 3 & 1 \end{bmatrix}$ (v) $\begin{bmatrix} 1 & 1 \\ 0 & 1 \end{bmatrix}$

15. Which of the following are true for matrices A , B and C ?

a) $A \times (B + C) = (A \times B) + (A \times C)$

b) $(A + B) \times C = (A \times B) + (A \times C)$

c) $A \times (B \times C) = (A \times B) \times C$

d) $(A \times B) = (B \times A)$

e) $(A \times I) = (I \times A) = I$

f) $(A \times I) = (I \times A) = A$

(i) $\{b,a\}$ (ii) $\{d,a,c\}$ (iii) $\{d,c\}$ (iv) $\{a,c,f\}$ (v) $\{e,b,f\}$

16. If the order of matrix A is $m \times n$ and B is $n \times o$,

then the order of $(A \times B)$ is

- (i) $m \times n$ (ii) $o \times m$ (iii) $n \times o$ (iv) $m \times o$
-

17. If $A = \begin{bmatrix} 1 & 3 \\ 4 & 3 \end{bmatrix}$ and $B = \begin{bmatrix} 1 & 1 \\ 2 & 5 \end{bmatrix}$, find $(A + B)(A - B)$

(i) $\begin{bmatrix} 8 & -4 \\ 16 & -2 \end{bmatrix}$ (ii) $\begin{bmatrix} 8 & -4 \\ 16 & -7 \end{bmatrix}$ (iii) $\begin{bmatrix} 8 & -4 \\ 16 & -4 \end{bmatrix}$

(iv) $\begin{bmatrix} 8 & -4 \\ 15 & -4 \end{bmatrix}$ (v) $\begin{bmatrix} 9 & -4 \\ 16 & -4 \end{bmatrix}$

18. If $A = \begin{bmatrix} 6 & 3 \\ 2 & 9 \end{bmatrix}$ and $B = \begin{bmatrix} 4 & 1 \\ 4 & 4 \end{bmatrix}$, find $A^2 - B^2$

(i) $\begin{bmatrix} 22 & 37 \\ -2 & 65 \end{bmatrix}$ (ii) $\begin{bmatrix} 22 & 37 \\ -2 & 66 \end{bmatrix}$ (iii) $\begin{bmatrix} 22 & 37 \\ -2 & 69 \end{bmatrix}$

(iv) $\begin{bmatrix} 22 & 37 \\ -2 & 68 \end{bmatrix}$ (v) $\begin{bmatrix} 22 & 37 \\ -2 & 67 \end{bmatrix}$

19. If $A = \begin{bmatrix} 2 & 3 \\ 1 & 5 \end{bmatrix}$ and $B = \begin{bmatrix} 5 & 6 \\ 9 & 1 \end{bmatrix}$, find $(A + B)^2$

(i) $\begin{bmatrix} 139 & 117 \\ 130 & 124 \end{bmatrix}$ (ii) $\begin{bmatrix} 142 & 117 \\ 130 & 126 \end{bmatrix}$ (iii) $\begin{bmatrix} 139 & 117 \\ 130 & 127 \end{bmatrix}$

(iv) $\begin{bmatrix} 139 & 117 \\ 129 & 126 \end{bmatrix}$ (v) $\begin{bmatrix} 139 & 117 \\ 130 & 126 \end{bmatrix}$

20. If $A = \begin{bmatrix} 6 & 3 \\ 8 & 9 \end{bmatrix}$ and $B = \begin{bmatrix} 4 & 5 \\ 9 & 3 \end{bmatrix}$, find $A^2 + B^2 + 2AB$

(i) $\begin{bmatrix} 224 & 158 \\ 409 & 293 \end{bmatrix}$ (ii) $\begin{bmatrix} 223 & 157 \\ 409 & 293 \end{bmatrix}$ (iii) $\begin{bmatrix} 221 & 158 \\ 409 & 293 \end{bmatrix}$

(iv) $\begin{bmatrix} 223 & 158 \\ 411 & 293 \end{bmatrix}$ (v) $\begin{bmatrix} 223 & 158 \\ 409 & 293 \end{bmatrix}$

21. If $A = \begin{bmatrix} 8 & 6 \\ 9 & 4 \end{bmatrix}$ and $B = \begin{bmatrix} 5 & 8 \\ 2 & 9 \end{bmatrix}$, find $(A - B)^2$

(i) $\begin{bmatrix} -5 & 1 \\ -14 & 11 \end{bmatrix}$ (ii) $\begin{bmatrix} -4 & 4 \\ -14 & 11 \end{bmatrix}$ (iii) $\begin{bmatrix} -5 & 4 \\ -15 & 11 \end{bmatrix}$

(iv) $\begin{bmatrix} -3 & 4 \\ -14 & 11 \end{bmatrix}$ (v) $\begin{bmatrix} -5 & 4 \\ -14 & 11 \end{bmatrix}$

22. If $A = \begin{bmatrix} 9 & 8 \\ 2 & 4 \end{bmatrix}$ and $B = \begin{bmatrix} 4 & 4 \\ 3 & 2 \end{bmatrix}$, find $A^2 + B^2 - 2AB$

(i) $\begin{bmatrix} 5 & 22 \\ 4 & 16 \end{bmatrix}$ (ii) $\begin{bmatrix} 5 & 24 \\ 4 & 16 \end{bmatrix}$ (iii) $\begin{bmatrix} 5 & 24 \\ 4 & 15 \end{bmatrix}$

(iv) $\begin{bmatrix} 8 & 24 \\ 4 & 16 \end{bmatrix}$ (v) $\begin{bmatrix} 5 & 25 \\ 4 & 16 \end{bmatrix}$

23. Which of the following are true ?

- a) If $A \times B$ is possible, the no of cols in A must be equal to no of rows in B
 - b) If $A \times B$ is possible, the no of rows in A must be equal to no of rows in B
 - c) If $A \times B$ is possible, the no of rows in A must be equal to no of cols in B
 - d) If $A \times B$ is possible, the no of cols in A must be equal to no of cols in B
- (i) {b,a} (ii) {c,a} (iii) {d,b,a} (iv) {a}
-

24. If $A = \begin{bmatrix} (-4) & 1 \end{bmatrix}$, $B = \begin{bmatrix} x \\ y \end{bmatrix}$, then $(A \times B) =$

(i) $\begin{bmatrix} (-4x + y) & (-4x + y) \end{bmatrix}$ (ii) $\begin{bmatrix} (-4x + y) \\ (-4x + y) \end{bmatrix}$

(iii) $\begin{bmatrix} (-4x) & x \\ (-4y) & y \end{bmatrix}$ (iv) $\begin{bmatrix} (-4x) & (-4y) \\ x & y \end{bmatrix}$

(v) $\begin{bmatrix} (-4x + y) \end{bmatrix}$

25. If $A = \begin{bmatrix} 7 & -8 \end{bmatrix}$ and $B = \begin{bmatrix} -9 & 2 \end{bmatrix}$ and $D = \begin{bmatrix} 54 & -86 \end{bmatrix}$,

$$\begin{bmatrix} 6 & 8 \\ & \end{bmatrix}$$

$$\begin{bmatrix} 1 & 4 \\ & \end{bmatrix}$$

$$\begin{bmatrix} 7 & 76 \\ & \end{bmatrix}$$

$$7A - 5B + 10C = D, \text{ then } C = ?$$

$$(i) \begin{bmatrix} -4 & -1 \\ -3 & 4 \end{bmatrix} \quad (ii) \begin{bmatrix} -5 & -2 \\ -3 & 4 \end{bmatrix} \quad (iii) \begin{bmatrix} -6 & -2 \\ -3 & 4 \end{bmatrix}$$

$$(iv) \begin{bmatrix} -4 & -2 \\ -3 & 4 \end{bmatrix} \quad (v) \begin{bmatrix} -4 & 1 \\ -3 & 4 \end{bmatrix}$$

$$26. \text{ If } A = \begin{bmatrix} a & b \\ c & d \end{bmatrix}, B = \begin{bmatrix} 4 & 8 \\ -5 & -2 \end{bmatrix} \text{ and } C = \begin{bmatrix} 6 & 60 \\ -35 & -14 \end{bmatrix}$$

$$\text{and } (A \times B) = C, \text{ find } A$$

$$(i) \begin{bmatrix} 12 & 6 \\ 0 & 7 \end{bmatrix} \quad (ii) \begin{bmatrix} 6 & 6 \\ 0 & 7 \end{bmatrix} \quad (iii) \begin{bmatrix} 9 & 6 \\ 0 & 6 \end{bmatrix}$$

$$(iv) \begin{bmatrix} 9 & 7 \\ 0 & 7 \end{bmatrix} \quad (v) \begin{bmatrix} 9 & 6 \\ 0 & 7 \end{bmatrix}$$

$$27. \text{ If } B = \begin{bmatrix} 1 & 1 \\ 8 & 8 \end{bmatrix} \text{ and } C = \begin{bmatrix} 59 & 59 \\ 49 & 49 \end{bmatrix} \text{ and } (A \times B) = C, \text{ find } A$$

$$(i) \begin{bmatrix} 3 & 8 \\ 1 & 6 \end{bmatrix} \quad (ii) \begin{bmatrix} 6 & 7 \\ 1 & 6 \end{bmatrix} \quad (iii) \begin{bmatrix} 3 & 7 \\ 1 & 6 \end{bmatrix}$$

$$(iv) \begin{bmatrix} 3 & 6 \\ 1 & 6 \end{bmatrix} \quad (v) \begin{bmatrix} 3 & 5 \\ 1 & 6 \end{bmatrix}$$

$$28. \text{ If } B = \begin{bmatrix} 3 & 9 \\ 1 & 7 \end{bmatrix} \text{ and } C = \begin{bmatrix} 10 & 58 \end{bmatrix} \text{ and } (A \times B) = C, \text{ find } A$$

$$(i) \begin{bmatrix} 2 & 7 \end{bmatrix} \quad (ii) \begin{bmatrix} 1 & 9 \end{bmatrix} \quad (iii) \begin{bmatrix} 1 & 6 \end{bmatrix}$$

$$(iv) \begin{bmatrix} 1 & 7 \end{bmatrix} \quad (v) \begin{bmatrix} -2 & 7 \end{bmatrix}$$

$$29. \text{ Given } A = \begin{bmatrix} -2 & -4 \\ -7 & -7 \end{bmatrix} \text{ find } B \text{ such that } AB = BA = A$$

$$(i)$$

$$(ii)$$

$$(iii)$$

$$\begin{bmatrix} 4 & 0 \\ 0 & 1 \end{bmatrix} \quad \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix} \quad \begin{bmatrix} 2 & 0 \\ 0 & 1 \end{bmatrix}$$

$$(iv) \begin{bmatrix} -2 & 0 \\ 0 & 1 \end{bmatrix} \quad (v) \begin{bmatrix} 0 & 0 \\ 0 & 1 \end{bmatrix}$$

30. Find X if $A = \begin{bmatrix} 6 & -4 \\ 5 & 3 \end{bmatrix}$, $AX = B$ and $B = \begin{bmatrix} 56 & 12 \\ 34 & -47 \end{bmatrix}$

$$(i) \begin{bmatrix} 8 & -6 \\ -2 & -9 \end{bmatrix} \quad (ii) \begin{bmatrix} 8 & -4 \\ -3 & -9 \end{bmatrix} \quad (iii) \begin{bmatrix} 8 & -3 \\ -2 & -9 \end{bmatrix}$$

$$(iv) \begin{bmatrix} 8 & -4 \\ -2 & -9 \end{bmatrix} \quad (v) \begin{bmatrix} 10 & -4 \\ -2 & -9 \end{bmatrix}$$

31. Given $A = \begin{bmatrix} -6 & 7 \\ 1 & -4 \end{bmatrix}$ and $B = \begin{bmatrix} 7 \\ -21 \end{bmatrix}$,

find P such that $AP = B$

$$(i) \begin{bmatrix} 7 \\ 6 \end{bmatrix} \quad (ii) \begin{bmatrix} 5 \\ 7 \end{bmatrix} \quad (iii) \begin{bmatrix} 8 \\ 7 \end{bmatrix}$$

$$(iv) \begin{bmatrix} 9 \\ 7 \end{bmatrix} \quad (v) \begin{bmatrix} 7 \\ 7 \end{bmatrix}$$

32. Given $A = \begin{bmatrix} 4 & 2 & 0 \\ 0 & -3 & -2 \\ -3 & 3 & -4 \end{bmatrix}$ and $B = \begin{bmatrix} -14 \\ 7 \\ 14 \end{bmatrix}$,

find P such that $AP = B$

$$(i) \begin{bmatrix} -3 \\ -1 \\ -2 \end{bmatrix} \quad (ii) \begin{bmatrix} -3 \\ -1 \\ -1 \end{bmatrix} \quad (iii) \begin{bmatrix} -3 \\ -1 \\ -5 \end{bmatrix}$$

$$(iv) \begin{bmatrix} 0 \\ -1 \\ -2 \end{bmatrix} \quad (v) \begin{bmatrix} -4 \\ -1 \\ -2 \end{bmatrix}$$

Assignment Key

- 1) (iii)
- 2) (iii)
- 3) (v)
- 4) (v)
- 5) (iii)
- 6) (i)
- 7) (iv)
- 8) (v)
- 9) (i)
- 10) (i)
- 11) (ii)
- 12) (ii)
- 13) (iv)
- 14) (i)
- 15) (iv)
- 16) (iv)
- 17) (iii)
- 18) (v)
- 19) (v)
- 20) (v)
- 21) (v)
- 22) (ii)
- 23) (iv)
- 24) (v)
- 25) (iv)
- 26) (v)
- 27) (iii)
- 28) (iv)
- 29) (ii)
- 30) (iv)
- 31) (v)
- 32) (i)