ALPHA BETA PRUNING

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PROGRAM:

```
MAX, MIN = 1000, -1000
def minimax(depth, nodeIndex, maximizingPlayer, values, alpha, beta):
    if depth == 3:
        return values[nodeIndex]
    if maximizingPlayer:
        best = MIN
        for i in range(0, 2):
            val = minimax(depth + 1, nodeIndex * 2 + i, False, values, alpha, beta)
            best = max(best, val)
            alpha = max(alpha, best)
            if beta <= alpha:
                break
            return best
    else:
        best = MAX
        for i in range(0, 2):
            val = minimax(depth + 1, nodeIndex * 2 + i, True, values, alpha, beta)
            best = min(best, val)
            beta = min(beta, best)
            if beta <= alpha:
                break
            return best
```

```
if __name__ == "__main__":
        values = [3, 5, 6, 9, 1, 2, 0, -1]
        print("The optimal value is:", minimax(0, 0, True, values, MIN, MAX))
```

OUTPUT: