Question 1: What is the truth table for the expression:

A and not (not B and C and D)

| Α | В | C | D | Q |
|---|----|---|----|----|
| 0 | О | О | 0 | 0 |
| 0 | 0 | О | 1 | 0 |
| 0 | 0 | 1 | 0 | 0 |
| О | 0 | 1 | 1 | О |
| О | 1 | 0 | 0 | 0 |
| О | 1 | 0 | 1 | 0 |
| 0 | 1 | 1 | 0 | 0 |
| О | 1. | 1 | 1. | 0 |
| 1 | О | 0 | 0 | 1 |
| 1 | О | 0 | 1 | 1 |
| 1 | 0 | 1 | 0 | 1 |
| 1 | 0 | 1 | 1 | 0 |
| 1 | 1 | О | 0 | 1 |
| 1 | 1 | О | 1 | 1 |
| 1 | 1 | 1 | 0 | 1. |
| 1 | 1 | 1 | 1 | 1 |

Question 2: What is the truth table for the expression:

A and not (B and not C and D)

| А | В | C | D | Q |
|---|---|---|---|---|
| 0 | О | 0 | О | 0 |
| 0 | О | 0 | 1 | 0 |
| 0 | 0 | 1 | 0 | 0 |
| 0 | 0 | 1 | 1 | 0 |
| 0 | 1 | О | 0 | 0 |
| О | 1 | О | 1 | 0 |
| О | 1 | 1 | 0 | О |
| О | 1 | 1 | 1 | 0 |
| 1 | О | О | 0 | 1 |
| 1 | О | О | 1 | 1 |
| 1 | 0 | 1 | 0 | 1 |
| 1 | О | 1 | 1 | 1 |
| 1 | 1 | 0 | 0 | 1 |
| 1 | 1 | 0 | 1 | 0 |
| 1 | 1 | 1 | 0 | 1 |
| 1 | 1 | ı | 1 | 1 |

Question 3: What is the truth table for the expression:

A and not (B and not C and D)

| A | В | C | D | Q |
|---|---|---|----|---|
| 0 | О | О | О | 0 |
| 0 | 0 | О | 1 | 0 |
| О | 0 | 1 | 0 | 0 |
| 0 | 0 | 1 | 1 | 0 |
| О | 1 | 0 | 0 | 0 |
| О | 1 | О | 1 | О |
| О | 1 | 1 | О | О |
| О | 1 | 1 | 1 | 0 |
| 1 | О | О | О | 1 |
| 1 | О | О | 1 | 1 |
| 1 | 0 | 1 | О | 1 |
| 1 | О | 1 | 1 | 1 |
| 1 | 1 | 0 | 0 | 1 |
| 1 | 1 | 0 | 1. | 0 |
| 1 | 1 | 1 | 0 | 1 |
| 1 | 1 | 1 | 1. | 1 |

Question 4: What is the truth table for the expression:

not (A and B and C and D)

| A | В | C | D | Q |
|---|---|---|----|---|
| 0 | 0 | 0 | О | 1 |
| 0 | 0 | О | 1 | 1 |
| О | 0 | 1 | 0 | 1 |
| О | 0 | 1 | 1 | 1 |
| О | 1 | О | 0 | 1 |
| О | 1 | О | 1 | 1 |
| О | 1 | 1 | 0 | 1 |
| О | 1 | 1 | 1 | 1 |
| 1 | О | О | 0 | 1 |
| 1 | О | О | 1 | 1 |
| 1 | 0 | 1 | 0 | 1 |
| 1 | 0 | 1 | 1 | 1 |
| 1 | 1 | О | 0 | 1 |
| 1 | 1 | 0 | 1 | 1 |
| 1 | 1 | 1 | О | 1 |
| 1 | 1 | 1 | 1. | 0 |

Question 5: What is the truth table for the expression:

not (A and not (B and not C and D))

| А | В | C | D | Q |
|---|---|---|---|---|
| 0 | 0 | О | О | 1 |
| 0 | 0 | О | 1 | 1 |
| О | О | 1 | 0 | 1 |
| 0 | 0 | 1 | 1 | 1 |
| О | 1 | О | 0 | 1 |
| О | 1 | О | 1 | 1 |
| О | 1 | 1 | 0 | 1 |
| О | 1 | 1 | 1 | 1 |
| 1 | О | О | 0 | О |
| 1 | О | О | 1 | 0 |
| 1 | 0 | 1 | 0 | 0 |
| 1 | О | 1 | 1 | 0 |
| 1 | 1 | 0 | 0 | 0 |
| 1 | 1 | 0 | 1 | 1 |
| 1 | 1 | 1 | 0 | О |
| 1 | 1 | 1 | 1 | 0 |

Question 6: What is the truth table for the expression:

A and not (B and not C and D)

| А | В | C | D | Q |
|---|---|---|----|---|
| 0 | О | О | О | 0 |
| О | 0 | О | 1 | 0 |
| 0 | 0 | 1 | 0 | 0 |
| О | 0 | 1 | 1 | 0 |
| О | 1 | 0 | 0 | 0 |
| О | 1 | О | 1 | 0 |
| О | 1 | 1 | 0 | 0 |
| О | 1 | 1 | 1 | 0 |
| 1 | 0 | О | 0 | 1 |
| 1 | 0 | 0 | 1. | 1 |
| 1 | 0 | 1 | 0 | 1 |
| 1 | 0 | 1 | 1 | 1 |
| 1 | 1 | О | 0 | 1 |
| 1 | 1 | О | 1 | 0 |
| 1 | 1 | 1 | 0 | 1 |
| 1 | 1 | 1 | 1 | 1 |

Question 7: What is the truth table for the expression:

A and not (B and C and D)

| А | В | C | D | Q |
|---|---|---|----|---|
| О | О | О | О | 0 |
| О | 0 | 0 | 1 | 0 |
| О | 0 | 1 | 0 | 0 |
| 0 | 0 | 1 | 1 | 0 |
| 0 | 1 | 0 | 0 | 0 |
| О | 1 | О | 1 | 0 |
| О | 1 | 1 | 0 | 0 |
| О | 1 | 1 | 1 | 0 |
| 1 | 0 | О | 0 | 1 |
| 1 | 0 | 0 | 1. | 1 |
| 1 | 0 | 1 | 0 | 1 |
| 1 | 0 | 1 | 1 | 1 |
| 1 | 1 | О | 0 | 1 |
| 1 | 1 | О | 1 | 1 |
| 1 | 1 | 1 | 0 | 1 |
| 1 | 1 | 1 | 1 | О |