

Truth Table

| Bit 4 | Bit 3 | Bit 2 | Bit 1 | output |   |
|-------|-------|-------|-------|--------|---|
| 0     | 0     | 0     | 0     | 0      | 0 |
| 0     | 0     | 0     | 0     | 1      | 1 |
| 0     | 0     | 0     | 1     | 0      | 0 |
| 0     | 0     | 1     | 1     | 1      | 1 |
| 0     | 1     | 0     | 0     | 0      | 0 |
| 0     | 1     | 0     | 0     | 1      | 1 |
| 0     | 1     | 1     | 1     | 0      | 1 |
| 0     | 1     | 1     | 1     | 1      | 1 |
| 1     | 0     | 0     | 0     | 0      | 0 |
| 1     | 0     | 0     | 0     | 1      | 1 |
| 1     | 0     | 1     | 1     | 0      | 1 |
| 1     | 0     | 1     | 1     | 1      | 1 |
| 1     | 1     | 0     | 0     | 0      | 0 |
| 1     | 1     | 0     | 0     | 1      | 1 |
| 1     | 1     | 1     | 1     | 0      | 1 |
| 1     | 1     | 1     | 1     | 1      | 1 |