

1) $144 = 2^4 * 3^2$

Factors: 1, 2, 3, 4, 6, 8, 9, 12, 16, 18, 24, 36, 48, 72, 144

This has an odd number of factors because it is a perfect square

2) $490 = 2 * 5 * 7^2$

Factors: 1, 2, 5, 7, 10, 14, 35, 49, 70, 98, 245, 490

3) $1001 = 7 * 11 * 13$

Factors: 1, 7, 11, 13, 77, 91, 143, 1001

4) $2432 = 2^7 * 19$

Factors: 1, 2, 4, 8, 16, 19, 32, 38, 64, 76, 128, 152, 304, 608, 1216, 2432

5) $4087 = 61 * 67$

Factors: 1, 61, 67, 4087

6) $1485 = 3^3 * 5 * 11$

Factors: 1, 3, 5, 9, 11, 15, 27, 33, 45, 55, 99, 135, 165, 297, 495, 1485

7) 3001 is prime

Factors: 1, 3001

8) $10000 = 2^4 * 5^4$

Factors: 1, 2, 4, 5, 8, 10, 16, 20, 25, 40, 50, 80, 100, 125, 200, 250, 400, 500, 625, 1000, 1250, 2000, 2500, 5000, 10000

This has an odd number of factors because it is a perfect square

9) $2875 = 5^3 * 23$

Factors: 1, 5, 23, 25, 115, 125, 575, 2875

10) $9999 = 3^2 * 11 * 101$

Factors: 1, 3, 9, 11, 33, 99, 101, 303, 909, 1111, 3333, 9999

11) $225 = 3^2 * 5^2$

Factors: 1, 3, 5, 9, 15, 25, 45, 75, 225

This has an odd number of factors because it is a perfect square