Name: Date:

Identify the Prime Numbers from 1 to 50

A reduce fractions to lowest term exercise

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50

Cross through number procedure:

- 1. Eliminate 1
- 2. Eliminate even numbers of 2
- 3. Eliminate multiples of 3 above 3
- 4. Eliminate multiples of 5 above 5
- 5. Eliminate multiples of 7 above 7

List the set of prime numbers from 1 to 50:

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Find the Prime Factors of Any Number

We can express any whole number as a factor of prime numbers. For example, we can take 24 and factor it.

$$24 = 2 \times 12$$

 $2 \times 12 = 2 \times 2 \times 6$
 $2 \times 2 \times 6 = 2 \times 2 \times 2 \times 3$

So 24 can be represented as $2 \times 2 \times 2 \times 3$ or $2^3 \times 3$. This will be useful when reducing a fractions to lowest terms,

Vet Tech Mathematics

World Class CAD Challenge: Find the prime factors of these numbers.

1	36	2	49
3	52	4	72
5	86	6	64
7	144	8	176
9	314	10	254

Reduce a Fraction to Lowest Terms

From the procedure we just learned, we can convert the numerator and denominator to prime numbers.

$$\frac{48}{216}$$

$$48 = 2 \times 24$$

$$48 = 2 \times 2 \times 12$$

$$216 = 2 \times 2 \times 54$$

$$48 = 2 \times 2 \times 2 \times 6$$

$$216 = 2 \times 2 \times 2 \times 2 \times 27$$

$$48 = 2 \times 2 \times 2 \times 2 \times 3$$

$$216 = 2 \times 2 \times 2 \times 3 \times 9$$

$$216 = 2 \times 2 \times 2 \times 3 \times 3 \times 3$$

So we can rewrite the fraction as:

$$\frac{2 \times 2 \times 2 \times 2 \times 3}{2 \times 2 \times 2 \times 3 \times 3 \times 3}$$

And we can cross out like terms:

We reduce the fraction to:

$$\frac{2}{9}$$

How can we use dividing the numerator by the denominator to check our work?

48	2
$\frac{48}{216}$	9

Vet Tech Mathematics

World Class CAD Challenge 25–6: Find the lowest terms of these fractions using prime numbers.

1	42 92
2	$\frac{8}{84}$
3	$\frac{27}{63}$
4	20 135
5	312 524