Name

# Rational Root Theorem - Possible Roots Form

**1** $f(x) = 2x^3 - 14x^2 + 28x - 16$

What are the possible rational roots of this polynomial?

| A | B | C | D |
|---|---|---|---|
| factors of 14 / factors of 2 | factors of 16 / factors of 14 | factors of 2 / factors of 16 | factors of 16 / factors of 2 |

**2** $f(x) = 4x^4 - 16x^3 - 12x^2 + 40x + 32$

What are the possible rational roots of this polynomial?

| A | B | C | D |
|---|---|---|---|
| factors of 16 / factors of 4 | factors of 4 / factors of 32 | factors of 32 / factors of 4 | factors of 32 / factors of 16 |

**3** $f(x) = 5x^5 - 40x^3 + 30x^2 + 35x - 30$

What are the possible rational roots of this polynomial?

| A | B | C | D |
|---|---|---|---|
| factors of 30 / factors of 5 | factors of 5 / factors of 30 | factors of 40 / factors of 5 | factors of 30 / factors of 40 |

**4** What are the possible rational roots of this polynomial?

$$f(x) = 6x^3 + 18x^2 - 24$$

| A | B |
|---|---|
| factors of 24 / factors of 18 | factors of 24 / factors of 6 |
| C | D |
| factors of 18 / factors of 6 | factors of 6 / factors of 24 |

**5** $f(x) = 4x^4 + 24x^3 + 28x^2 - 24x - 32$

What are the possible rational roots of this polynomial?

| A | B | C | D |
|---|---|---|---|
| factors of 32 / factors of 4 | factors of 4 / factors of 32 | factors of 24 / factors of 4 | factors of 32 / factors of 24 |

**6** What are the possible rational roots of this polynomial?

$$f(x) = 5x^3 - 15x^2 + 20$$

| A | B |
|---|---|
| factors of 5 / factors of 20 | factors of 15 / factors of 5 |
| C | D |
| factors of 20 / factors of 15 | factors of 20 / factors of 5 |

**7** $f(x) = 2x^4 + 16x^3 + 30x^2 - 16x - 32$

What are the possible rational roots of this polynomial?

| A | B | C | D |
|---|---|---|---|
| factors of 2 / factors of 32 | factors of 16 / factors of 2 | factors of 32 / factors of 2 | factors of 32 / factors of 16 |

**8** $f(x) = 2x^4 + 6x^3 - 28x^2 - 96x - 64$

What are the possible rational roots of this polynomial?

| A | B | C | D |
|---|---|---|---|
| factors of 64 / factors of 6 | factors of 2 / factors of 64 | factors of 6 / factors of 2 | factors of 64 / factors of 2 |