

Dr. Del's Workforce Math

Advanced for Industry (76 Lessons)

BASIC MATH FOR INDUSTRY (24 LESSONS)

BASIC - Using a Scientific Calculator:

- CI: Introduction (5 Min.)
- C1: Basic Operations (6 Min.)
- C2: Real Numbers (6 Min.)
- C3: Negative Numbers (6 Min.)
- C4: Multiplication, Division and Percentage (7 Min.)
- C5: Percentage (3 Min.)
- C6: Using Memory (7 Min.)
- C7: Squares (3 Min.)
- C8: Square Roots (5 Min.)
- C9: Reciprocals (6 Min.)
- C10: Fractions (6 Min.)
- C11: Proper & Improper Fractions (6 Min.)
- C12: Converting Fractions to Decimals (6 Min.)

BASIC - Pre-Algebra:

- PI: Introduction (3 Min.)
- P1: Real Numbers, Integers & Rationals (5 Min.)
- P2: The Number Line & Negative Numbers (8 Min.)
- P3: Rules of Addition (10 Min.)
- P4: Rules of Multiplication (11 Min.)
- P5: Distributive Law (7 Min.)
- P6: Fractions (6 Min.)
- P7: Squares (5 Min.)
- P8: Square Roots (7 Min.)
- P9: Reciprocals (5 Min.)
- P10: Exponents (15 Min.)

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INTERMEDIATE MATH FOR INDUSTRY (28 LESSONS)

INTERMEDIATE - Algebra:

- AI: Introduction (7 Min.)
- A1: Four Ways to Solve an Algebra Equation (5 Min.)
- A2: The Rule of Algebra (8 Min.)
- A3: $X + A = B$ (9 Min.)
- A4: $AX = B$ (6 Min.)
- A5: $AX + B = CX + D$ (11 Min.)
- A6: $A/X = B/C$ (8 Min.)
- A7: $X^2 = A$ (5 Min.)
- A8: Square Root of $X = A$ (5 Min.)

INTERMEDIATE - Geometry:

- G1: What is Geometry? (9 Min.)
- G2: Straight Lines and Angles (8 Min.)
- G3: Parallel Lines (19 Min.)
- G4: Triangle Basics and the Sum of Angles (11 Min.)
- G5: Right Triangles and the Pythagorean Theorem (12 Min.)
- G6: Similar Triangles (12 Min.)
- G7: Quadrilaterals, Polygons and Perimeters (14 Min.)
- G8: Area of Triangles and Rectangles (18 Min.)
- G9: Formulas for Polygons (11 Min.)
- G10: Circles and Circumferences (13 Min.)
- G11: Circles and Areas (13 Min.)
- G13: Surface Areas of Blocks and Cylinders (9 Min.)
- G15: Volumes of Blocks and Cylinders (7 Min.)

INTERMEDIATE - Special Topics:

- MS1: Units Conversions (14 Min.)
- MS2: DMS vs. Decimal, Degrees (13 Min.)
- MS3: Exponents (14 Min.)
- MS4: Density and Weight (14 Min.)
- MS5: FLO SCI ENG Formats (12 Min.)
- MS5A: FLO SCI ENG Addendum (7 Min.)

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ADVANCED MATH FOR INDUSTRY (24 LESSONS)

ADVANCED - Using a Scientific Calculator:

- C13: Trigonometry Operations (6 Min.)
- C14: Using Sine (6 Min.)
- C15: Using Cosine (6 Min.)
- C16: Using Tangent (6 Min.)

ADVANCED - Algebra:

- A9: $\text{SIN } X = A$ (11 Min.)
- A10: $\text{COS } X = A$ (8 Min.)

ADVANCED - Geometry:

- G12: Circles and Special Properties (10 Min.)
- G14: Surface Areas of Cones (7 Min.)
- G16: Volumes of Cones (7 Min.)
- G17: Surface Areas of Spheres and Balls (7 Min.)
- G18: Archimedes Tombstone, Sphere Area and Volume (12 Min.)
- G19: When Geometry is not enough for Triangles (7 Min.)

ADVANCED - Trigonometry:

- T1: Introduction (6 Min.)
- T1: Trigonometry Functions (16 Min.)
- T2: Sines (20 Min.)
- T3: Cosines (18 Min.)
- T4: Tangents (9 Min.)
- T5: Warning about SIN^{-1} (9 Min.)
- T6: Law of Sines (12 Min.)
- T7: Law of Cosines and the generalized Pythagorean Theorem (14 Min.)
- T8: Trigonometry beyond Practical Math (5 Min.)

ADVANCED - Special Topics:

- MS6: Prefixes (14 Min.)
- MS7: Technician's Triangle (14 Min.)
- MS8: Polar Rectangular Coordinates (14 Min.)