FLORIDA DEPARTMENT OF EDUCATION
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# FAST/B.E.S.T. Mathematics Reference Sheets Packet

- Grade 4 FAST Mathematics Reference Sheet
- Grade 5 FAST Mathematics Reference Sheet
- Grade 6 FAST Mathematics Reference Sheet
- Grade 7 FAST Mathematics Reference Sheet (2 pages)
- Grade 8 FAST Mathematics Reference Sheet (2 pages)
- B.E.S.T. Algebra 1 EOC Mathematics Reference Sheet
- B.E.S.T. Geometry EOC Mathematics Reference Sheet (2 pages)

## 2025–2026

# Grade 4 FAST Mathematics Reference Sheet

## Customary Conversions

1 foot = 12 inches
1 yard = 3 feet

1 pint = 2 cups
1 quart = 2 pints
1 gallon = 4 quarts

1 pound = 16 ounces

## Metric Conversions

1 meter = 100 centimeters
1 meter = 1000 millimeters
1 kilometer = 1000 meters

1 liter = 1000 milliliters

1 gram = 1000 milligrams
1 kilogram = 1000 grams

## Time Conversions

1 minute = 60 seconds
1 hour = 60 minutes

## Formulas

Rectangle $P = l + l + w + w$
$A = l \times w$

| Key | |
|---|---|
| $l$ = length<br>$w$ = width | $P$ = perimeter<br>$A$ = area |

# Grade 5 FAST Mathematics Reference Sheet

## Customary Conversions

1 foot = 12 inches
1 yard = 3 feet
1 mile = 5,280 feet
1 mile = 1,760 yards

1 cup = 8 fluid ounces
1 pint = 2 cups
1 quart = 2 pints
1 gallon = 4 quarts

1 pound = 16 ounces
1 ton = 2,000 pounds

## Metric Conversions

1 centimeter = 10 millimeters
1 meter = 100 centimeters
1 meter = 1000 millimeters
1 kilometer = 1000 meters

1 liter = 1000 milliliters

1 gram = 1000 milligrams
1 kilogram = 1000 grams

## Time Conversions

1 minute = 60 seconds
1 hour = 60 minutes
1 day = 24 hours
1 week = 7 days

## Formulas

| | |
|---|---|
| Rectangle | $P = l + l + w + w$<br>$P = 2l + 2w$<br>$A = l \times w$ |
| Rectangular Prism | $V = l \times w \times h$<br>or<br>$V = B \times h$ |

| Key | |
|---|---|
| $l$ = length<br>$w$ = width<br>$h$ = height<br>$B$ = area of the base | $P$ = perimeter<br>$A$ = area<br>$V$ = volume |

# Grade 6 FAST Mathematics Reference Sheet

## Customary Conversions

1 foot = 12 inches
1 yard = 3 feet
1 mile = 5,280 feet
1 mile = 1,760 yards

1 cup = 8 fluid ounces
1 pint = 2 cups
1 quart = 2 pints
1 gallon = 4 quarts

1 pound = 16 ounces
1 ton = 2,000 pounds

## Metric Conversions

1 meter = 100 centimeters
1 meter = 1000 millimeters
1 kilometer = 1000 meters

1 liter = 1000 milliliters

1 gram = 1000 milligrams
1 kilogram = 1000 grams

## Time Conversions

1 minute = 60 seconds
1 hour = 60 minutes
1 day = 24 hours
1 week = 7 days
1 year = 365 days
1 year = 52 weeks

## Formulas

Rectangular Prism

$V = lwh$

or

$V = Bh$

| Key | |
|---|---|
| $l$ = length | $B$ = area of base |
| $w$ = width | $V$ = volume |
| $h$ = height | |

# Grade 7 FAST Mathematics Reference Sheet

## Conversions within a System of Measure

### Customary Conversions

1 foot = 12 inches
1 yard = 3 feet
1 mile = 5,280 feet
1 mile = 1,760 yards

1 cup = 8 fluid ounces
1 pint = 2 cups
1 quart = 2 pints
1 gallon = 4 quarts

1 pound = 16 ounces
1 ton = 2,000 pounds

### Metric Conversions

1 meter = 100 centimeters
1 meter = 1000 millimeters
1 kilometer = 1000 meters

1 liter = 1000 milliliters

1 gram = 1000 milligrams
1 kilogram = 1000 grams

### Time Conversions

1 minute = 60 seconds
1 hour = 60 minutes
1 day = 24 hours
1 week = 7 days
1 year = 365 days
1 year = 52 weeks

## Conversions between Systems of Measure

### Customary to Metric Conversion Approximations

1 inch = 2.54 centimeters
1 foot = 0.305 meters
1 mile = 1.61 kilometers

1 cup = 0.24 liters
1 gallon = 3.785 liters
1 ounce = 28.35 grams
1 pound = 0.454 kilograms

### Metric to Customary Conversion Approximations

1 centimeter = 0.39 inches
1 meter = 3.28 feet
1 kilometer = 0.62 miles

1 liter = 4.23 cups
1 liter = 0.264 gallons
1 gram = 0.0352 ounces
1 kilogram = 2.204 pounds

# Grade 7 FAST Mathematics Reference Sheet

## Formulas

| | |
|---|---|
| Parallelogram | $A = bh$ |
| Or Rhombus | $A = lw$ |
| Trapezoid | $A = \frac{1}{2}h(b_1 + b_2)$ |
| Circle | $C = 2\pi r$ or $C = \pi d$<br>$A = \pi r^2$ |
| Right Circular Cylinder | $V = Bh$ or $V = \pi r^2 h$ |

| Key | |
|---|---|
| $b$ = base<br>$h$ = height<br>$l$ = length<br>$w$ = width<br>$r$ = radius<br>$d$ = diameter<br>$B$ = area of base | $A$ = area<br>$C$ = circumference<br>$V$ = volume |

| **Simple Interest Formula** |
|---|
| $I = prt$<br>where $I$ = interest, $p$ = principal, $r$ = rate, $t$ = time |
| **Percent Error Formula** |
| $\frac{\lvert Estimate - Actual \rvert}{Actual} \times 100$ |
| **Percent of Change** |
| $\frac{final\ value - initial\ value}{initial\ value} \times 100$ |

# Grade 8 FAST Mathematics Reference Sheet

## Conversions within a System of Measure

### Customary Conversions

1 foot = 12 inches
1 yard = 3 feet
1 mile = 5,280 feet
1 mile = 1,760 yards

1 cup = 8 fluid ounces
1 pint = 2 cups
1 quart = 2 pints
1 gallon = 4 quarts

1 pound = 16 ounces
1 ton = 2,000 pounds

### Metric Conversions

1 meter = 100 centimeters
1 meter = 1000 millimeters
1 kilometer = 1000 meters

1 liter = 1000 milliliters

1 gram = 1000 milligrams
1 kilogram = 1000 grams

### Time Conversions

1 minute = 60 seconds
1 hour = 60 minutes
1 day = 24 hours
1 week = 7 days
1 year = 365 days
1 year = 52 weeks

## Conversions between Systems of Measure

### Customary to Metric Conversion Approximations

1 inch = 2.54 centimeters
1 foot = 0.305 meters
1 mile = 1.61 kilometers

1 cup = 0.24 liters
1 gallon = 3.785 liters
1 ounce = 28.35 grams
1 pound = 0.454 kilograms

### Metric to Customary Conversion Approximations

1 centimeter = 0.39 inches
1 meter = 3.28 feet
1 kilometer = 0.62 miles

1 liter = 4.23 cups
1 liter = 0.264 gallons
1 gram = 0.0352 ounces
1 kilogram = 2.204 pounds

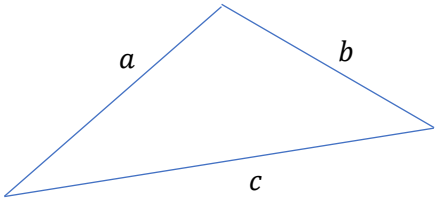
## Formula

| Slope Formula |
| --- |
| $m = \frac{y_2 - y_1}{x_2 - x_1}$<br><br>where $m$ = slope |

# Grade 8 FAST Mathematics Reference Sheet

## Theorems

### Triangle Inequality Theorem

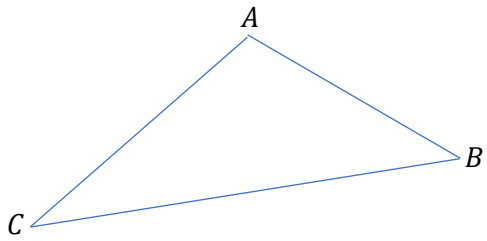



$a + b > c$

$a + c > b$

$b + c > a$

### Triangle Sum Theorem




$m\angle A + m\angle B + m\angle C = 180°$

# B.E.S.T. Algebra 1 EOC Mathematics Reference Sheet

### Customary Conversions

1 foot = 12 inches
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1 mile = 1,760 yards

1 cup = 8 fluid ounces
1 pint = 2 cups
1 quart = 2 pints
1 gallon = 4 quarts

1 pound = 16 ounces
1 ton = 2,000 pounds

### Metric Conversions

1 meter = 100 centimeters
1 meter = 1000 millimeters
1 kilometer = 1000 meters

1 liter = 1000 milliliters

1 gram = 1000 milligrams
1 kilogram = 1000 grams

### Time Conversions

1 minute = 60 seconds
1 hour = 60 minutes
1 day = 24 hours
1 year = 365 days
1 year = 52 weeks

## Formulas

| Forms of Linear Equations | Forms of Quadratic Functions | Forms of Exponential Functions |
|---|---|---|
| $y = mx + b$<br>$Ax + By = C$<br>$y - y_1 = m(x - x_1)$ | $f(x) = ax^2 + bx + c$<br>$f(x) = a(x - h)^2 + k$<br>$f(x) = a(x - p)(x - q)$ | $f(x) = ab^x$<br>$f(x) = a(1 \pm r)^x$ |

| Quadratic Formula |
|---|
| $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$<br>where $ax^2 + bx + c = 0$ and $a \neq 0$ |

| Final Amounts under Simple Interest | Final Amounts under Compound Interest |
|---|---|
| $A = P(1 + rt)$<br>where $P$ = principal, $r$ = rate, and $t$ = time | $A = P\left(1 + \frac{r}{n}\right)^{nt}$<br>where $P$ = principal, $r$ = rate, $n$ = number of times compounded, and $t$ = time |

# B.E.S.T. Geometry EOC Mathematics Reference Sheet

### Customary Conversions

1 foot = 12 inches
1 yard = 3 feet
1 mile = 5,280 feet
1 mile = 1,760 yards

1 cup = 8 fluid ounces
1 pint = 2 cups
1 quart = 2 pints
1 gallon = 4 quarts

1 pound = 16 ounces
1 ton = 2,000 pounds

### Metric Conversions

1 meter = 100 centimeters
1 meter = 1000 millimeters
1 kilometer = 1000 meters

1 liter = 1000 milliliters

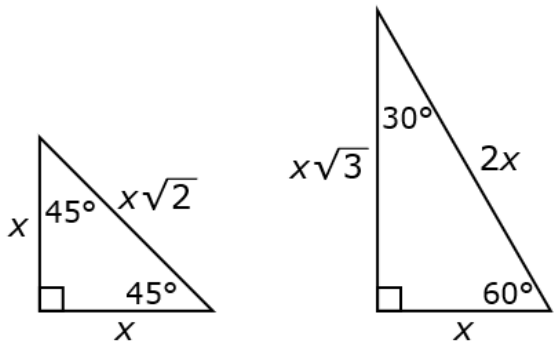
1 gram = 1000 milligrams
1 kilogram = 1000 grams

### Time Conversions

1 minute = 60 seconds
1 hour = 60 minutes
1 day = 24 hours
1 year = 365 days
1 year = 52 weeks

| Distance Formula | Midpoint Formula | Slope Formula |
|---|---|---|
| $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$ | $(x_M, y_M) = \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}\right)$ | $m = \frac{y_2 - y_1}{x_2 - x_1}$ |

### Special Right Triangles



# B.E.S.T. Geometry EOC Mathematics Reference Sheet

## Formulas

| | |
|---|---|
| Parallelogram | $A = bh$ |
| Trapezoid | $A = \frac{1}{2}h(b_1 + b_2)$ |
| Circle | $C = 2\pi r$ or $C = \pi d$<br>$A = \pi r^2$ |
| Regular Polygon | $A = \frac{1}{2}Pa$ |
| Prism/Cylinder | $SA = 2B + Ph$<br>$V = Bh$ |
| Cone | $SA = B + \pi r h_s$ or<br>$SA = B + \pi r l$<br>$V = \frac{1}{3}Bh$ |
| Regular Pyramid | $SA = B + \frac{1}{2}Ph_s$ or<br>$SA = B + \frac{1}{2}Pl$<br>$V = \frac{1}{3}Bh$ |
| Sphere | $SA = 4\pi r^2$<br>$V = \frac{4}{3}\pi r^3$ |

| Key | |
|---|---|
| $P$ = perimeter | $A$ = area |
| $a$ = apothem | $C$ = circumference |
| $h$ = height | $SA$ = surface area |
| $r$ = radius | $V$ = volume |
| $h_s$= slant height | |
| $l$ = slant height | |
| $b$ = base | |
| $d$ = diameter | |
| $B$ = area of base | |

| **Trigonometric Ratios** | | |
|---|---|---|
| $\sin\theta = \frac{opposite}{hypotenuse}$ | $\cos\theta = \frac{adjacent}{hypotenuse}$ | $\tan\theta = \frac{opposite}{adjacent}$ |