# Grade 6 Math Cheat Sheet

## Make equivalent ratios

| | |
|---|---|
| Juice to water | **2 : 3** |
| Double both parts | **4 : 6** |
| Triple both parts | **6 : 9** |

Keep the quantities in the same order.

## Find a unit rate

| | |
|---|---|
| Given rate | **15 miles in 3 hours** |
| For one hour | **15 ÷ 3 = 5 miles per hour** |

Divide the miles by the hours to get miles per hour.

## Fractions, decimals and percents

| | |
|---|---|
| One quarter | **1/4 = 0.25 = 25%** |
| One half | **1/2 = 0.5 = 50%** |
| Three quarters | **3/4 = 0.75 = 75%** |

To find a decimal, divide the numerator by the denominator. Percent means parts per hundred.

## Percents

| | |
|---|---|
| Percent as a decimal | **p% = p / 100** |
| Part of a whole | **part = rate × whole** |

Use the decimal form for the rate.
Example: 15% of 80 is 0.15 × 80 = 12.

## Compare rational numbers

| | |
|---|---|
| Order | **−4 < −1/2 < 0 < 3** |
| Opposites | **−4 and 4** |
| Distance from zero | **\|−4\| = 4** |

Numbers increase from left to right.

## One-step equations

| | |
|---|---|
| Undo addition | **x + 7 = 12; x = 5** |
| Undo multiplication | **4x = 20; x = 5** |
| Test an inequality | **5 > 3 is true** |

Do the same operation to both sides of an equation.
Check an answer by substituting it for x.

## Center and spread

| | |
|---|---|
| Mean | **sum / count** |
| Median | **middle of the ordered data** |
| Range | **maximum − minimum** |

For an even count, the median is the mean of the two middle values.
Example: 1, 4, 7, 8 has median 5.5.

## Area of plane figures

| | |
|---|---|
| Triangle | **A = ½bh** |
| Rectangle or parallelogram | **A = bh** |
| Trapezoid | **$A = \frac{1}{2}(b_1 + b_2)h$** |

Measure h perpendicular to the base.
The trapezoid bases are parallel.
Use square units.

