Mulch & Gravel Quantity Cheat Sheet (FreeBuildTools)

Area formulas

Rectangle: L × W (ft²) Circle: π r² (ft²) Triangle: ½ × base × height (ft²)

Net area = sum of included areas – sum of excluded areas.

Inches to feet and volume

Depth in feet = depth (in) ÷ 12. Volume (ft³) = area (ft²) × depth (in) ÷ 12.

Cubic yards = ft³ ÷ 27. Cubic meters = ft³ ÷ 35.3146667.

Waste allowance

Required volume = exact volume × (1 + waste %). Waste is a separate, editable line - never hidden inside a total.

High waste above 25% is unusual but allowed; the calculator flags it.

Stock subtraction

Net need = max(0, required volume – on-hand stock). Stock can drive the need to zero, never below.

Bag rounding

Packages = ceil(net need ÷ package coverage). Rounding happens once, at this final step, with a small tolerance so an exact boundary never buys an extra package.

Leftover = packages × coverage – net need.

Worked example (mulch)

S
V

B
1

D
3

E	

$$\frac{1}{W^{2}}$$

$$\frac{2}{c}$$

Important

Volume never implies a fixed tonnage. Weight requires a density you enter yourself (lb/ft³ or tons/yd³).