

Teacher Answer Key - Mission: Space Fuel Crystals

Part 1: Energy Shading Sectors

Sector ID & Name	Improper Fraction	Shading Goal	Mixed Number Solution
#1 Sector Alpha Fuel	$\frac{7}{3}$	Shade 7 parts across 3-part shapes	$2\frac{1}{3}$
#2 Nebula-X Cell	$\frac{9}{4}$	Shade 9 parts across 4-part shapes	$2\frac{1}{4}$
#3 Orion Matrix Core	$\frac{5}{2}$	Shade 5 parts across 2-part shapes	$2\frac{1}{2}$
#4 Pulse Engine Charger	$\frac{11}{6}$	Shade 11 parts across 6-part shapes	$1\frac{5}{6}$
#5 Cosmic Warp Battery	$\frac{14}{5}$	Shade 14 parts across 5-part shapes	$2\frac{4}{5}$
#6 Hyperdrive Igniter	$\frac{13}{4}$	Shade 13 parts across 4-part shapes	$3\frac{1}{4}$
#7 Supernova Stabilizer	$\frac{17}{8}$	Shade 17 parts across 8-part shapes	$2\frac{1}{8}$
#8 Quantum Singularity	$\frac{23}{6}$	Shade 23 parts across 6-part shapes	$3\frac{5}{6}$
 BOSS: Goliath Core	$\frac{29}{8}$	Shade 29 parts across 8-part shapes	$3\frac{5}{8}$

Part 2: Emergency Repair Protocols (Engineering Logs)

Diagnostic Log	Input Improper Fraction	Calculation / Division Strategy	Correct Mixed Number
#9 Coolant Leak	$\frac{19}{4}$ liters	$19 \div 4$ = 4 with a remainder of 3	$4\frac{3}{4}$ Liters
#10 Hull Plates	$\frac{26}{3}$ meters	$26 \div 3$ = 8 with a remainder of 2	$8\frac{2}{3}$ Meters