Pt. value in Red

1. Given ±2 | Unknown ±2 | Eq ±2 | Substitution ±2 | Solve & Ans. ±2 = 10 pts

$L = 4\text{ ft}$ | $V = ?$ | $V = L \times W \times H$ | $V = 4\text{ ft} \times 2.5\text{ ft} \times 3\text{ ft}$ | $V = 30\text{ ft}^3$

$H = 2.5\text{ ft}$

$W = 3\text{ ft}$

2. Given ±2 | Unknown ±2 | Eq. ×2 | Sub. ±2 | Solve & Ans. ±2 = 10pts

$H = 16\text{ ft}$ | $A = ?$ | $A = L \times W$ | $A = 16\text{ ft} \times 18\text{ ft}$ | $A = 288\text{ ft}^2$

$L = 18\text{ ft}$

3. $A = 288\text{ ft}^2$

conv. factor $1\text{ g} = 225\text{ sq. ft}$

work ±5 ±5 = 10 pts

$$288\text{ ft}^2 \times \frac{1\text{ g}}{225\text{ ft}^2} = 1.28\text{ g}$$

x3 x3 x3 x3 x3 = 15 pts

4. $V = \frac{76\ km}{hr} \times \frac{1000\ m}{1\ km} \times \frac{1\ hr}{60\ min} \times \frac{1\ min}{60\ s} = 21.11\ m/s$

5. $29\ days \times \frac{24\ hr}{1\ day} \times \frac{60\ min}{1\ hr} \times \frac{60\ s}{1\ min} = 2,505,600\ s$

x2 x2 x2 x2 x2 = 10 pts

b a) 2804 m — 4 — x2

b) .0029 m — 2 — x2

c) 4.06×10^{-5} km — 3 — x2

d) 4.06×10^{5} g — 3 — x2

e) 2.84 m — 3 — x2

7 a) $300000\,s$ b) $.000508\,kg$ c) $302\,000000\,m$ d) $.004\,kg$

$3 \times 10^5\,s$ $5.08 \times 10^{-4}\,kg$ $3.02 \times 10^8\,m$ $4 \times 10^{-3}\,kg$

+3 +3 +3 +3

8a. $1.6\,km \times \frac{1000\,m}{1\,km} = 1600\,m$ (meters)

$1.62\,m \qquad 1.62\,m$

$1200\,cm \times \frac{1\,m}{100\,cm} = 12\,m$

$1613.62\,m$

(OR) $1.6\,km \qquad 1.6\,km$ (kilometers)

$1.62\,m \times \frac{1\,km}{1000\,m} = .00162\,km$

$1200\,cm \times \frac{1\,km}{100{,}000\,cm} = .012\,km$

$1.61362\,km$

(OR) $1.6\,km \times \frac{100{,}000}{1\,km} = 160000\,cm$ (centimeters)

$1.62\,m \times \frac{100\,cm}{1\,m} = 162\,cm$

$1200\,cm \qquad 1200\,cm$

$161362\,cm$

+5 work + 5 answer = 10 pts

b. $10.8\,g$

$-\,2.264\,g$ +5

$2.536\,g$ +5

9a. $(2 \times 10^4 m)(4 \times 10^8 m)$

Hint:

Add exponents

$2 \times 4 = 8 \times 10^{12} m^2$

$\times^2$ $+5$

9b. $6 \times 10^8 kg / 2 \times 10^4 m^3$

Hint:

Find difference between exponents

$6/2 = 3 \times 10^4 kg/m^3$

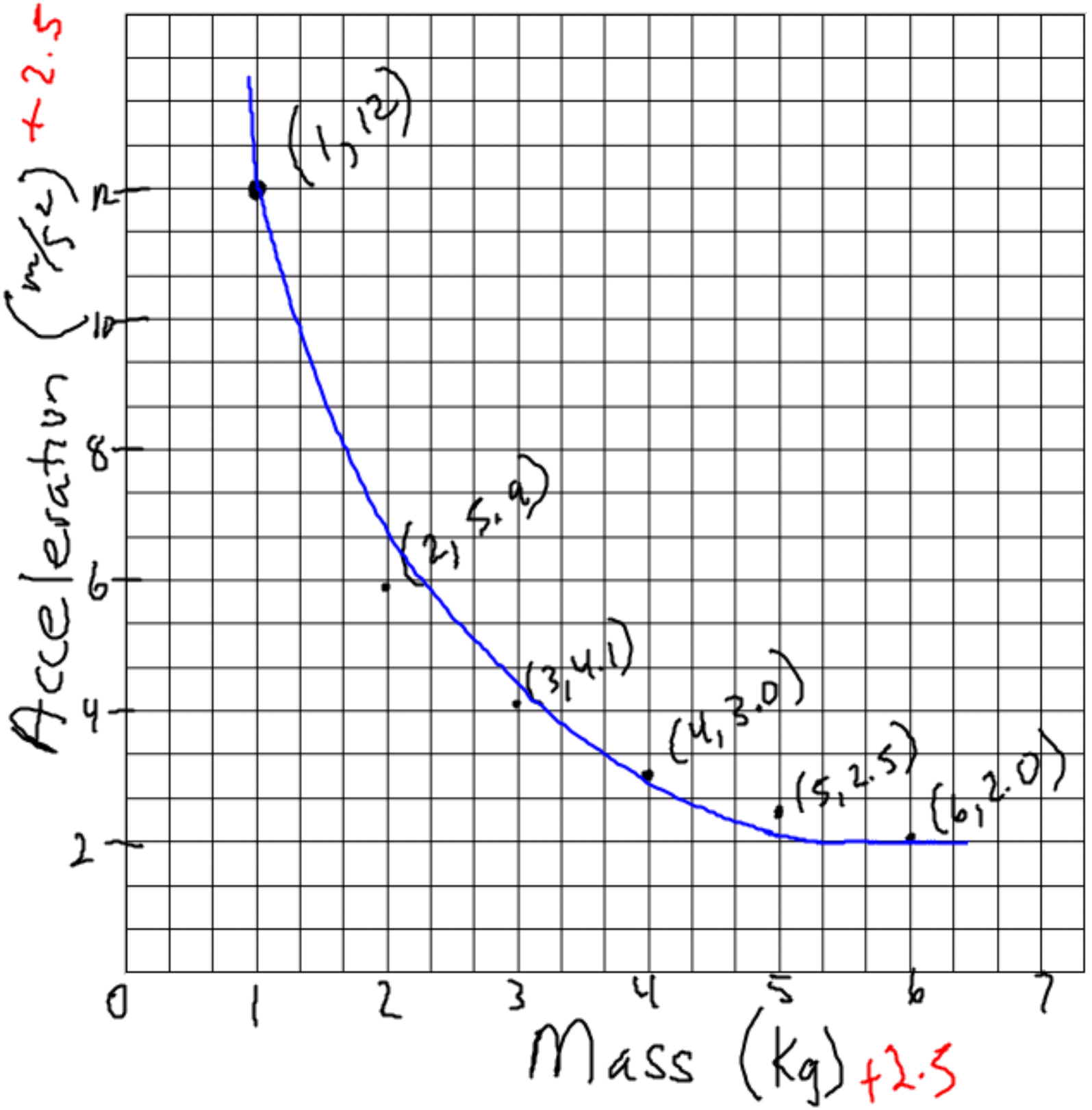
$\times^2$ $+5$

10 a. $1.1\,\text{cm} \times \frac{1\,\text{m}}{100\,\text{cm}} = .011\,\text{m}$ (+3, +2)

b. $2.1\,\text{km} \times \frac{1000\,\text{m}}{1\,\text{km}} = 2100\,\text{m}$ (+3, +2)

c. $7.23\,\mu\text{g} \times \frac{1\,\text{mg}}{1000\,\mu\text{g}} \times \frac{1\,\text{g}}{1000\,\text{mg}} \times \frac{1\,\text{kg}}{1000\,\text{g}} = 7.23 \times 10^{-9}\,\text{kg}$ (+1, +1, +1, +2)

11)



a) 2.5 x-axis labeled w/units
2.5 y-axis labeled w/units
5.0 spacy
5.0 plots w/coord.
5.0 line (i.e. curve)

b) inverse relation +5
mass ↑ accelerat ↓ +5