

## Direct and Inverse Proportionality – Answers

### Proportionality 1

- |                              |                        |              |
|------------------------------|------------------------|--------------|
| 1) (a) $y = 1.6x$            | (b) $y = 11.2$         | (c) $x = 30$ |
| 2) (a) $P = 2.5Q^2$          | (b) $P = 62.5$         | (c) $Q = 6$  |
| 3) (a) $I = \frac{V}{60}$    | (b) $\frac{1}{3} A$    | (c) $42V$    |
| 4) (a) $M = \frac{50r^2}{3}$ | (b) $204\frac{1}{6} g$ | (c) $3.65cm$ |
| 5) (a) $V = 8\sqrt{R}$       | (b) $31.0 km/h$        | (c) $189m$   |
| 6) (a) $V = 0.0008 h^3$      | (b) $3.2768 litres$    | (c) $13.6cm$ |

### Proportionality 2

- |   |               |                |
|---|---------------|----------------|
| 1) (a) $y = \frac{40}{x}$                     | (b) $y = 4$   | (c) $x = 20$   |
| 2) (a) $p = \frac{1512}{q^3}$                 | (b) $p = 56$  | (c) $q = 2$    |
| 3) (a) $P = \frac{240}{v}$                    | (b) $120 N$   |                |
| 4) (a) $I = \frac{1000}{d^2}$                 | (b) $I = 125$ | (c) $7.07$     |
| 5) (a) $I = \frac{12}{R}$                     | (b) $0.24A$   | (c) $15\Omega$ |
| 6) (a) $G = \frac{2.048 \times 10^{11}}{D^2}$ | (b) $2048N$   | (c) $761N$     |

### Proportionality Homework

- 1) See sheet 1 Q3
- 2) See sheet 2 Q4
- 3) See sheet 1 Q5
- 4) See sheet 2 Q3
- 5) See sheet 2 Q6