72% = 1296
1% = 18 (1296 ÷ 72)
100% = 1800 (18 × 100) This means that 1800 − 1296 = 504 failed

Multiplier = 100% − 7% = 93% = 0.93

1 Jan = 94 kg

1 Feb = 94 × 0.93 = 87.42

1 Mar = 87.42 × 0.93 = 81.3006

1 Apr = 81.3006 × 0.93 = 75.609558

1 May = 75.60... × 0.93 = 70.316... kg

During the month of Apr. 1 Jack will achieve his target weight.

Multiplier = 100% + 4% = 104% = 1.04

Vehicles = 2.69×1.04^3

= 3.025...

= 3.03 million (3 sig figs)

104% = £894.40

1% = £8.60 (894.40 ÷ 104)

100% = £860 (8.60 × 100)

Multiplier = 100% + 10% = 110% = 1.1

Miles = 28×1.1^4

= 40.9948

= 41 (nearest mile)

84% = £3780
1% = £45 (3780 ÷ 84)
100% = £4500 (45 × 100)

let x be hourly rate of $\frac{1}{3}$ more $= 1\frac{1}{3} = \frac{4}{3}$

So, $15x + 8x + 12\left(\frac{4}{3}x\right) = 429$

$23x + 16x = 429$

$39x = 429$

$(\div 39)$ $x = 11$

Tom is paid £11 per hour ⇒ £165 for 15 hours

D = 3km = 3000m
S = ? m/s
T = 16 days = (16 × 24 × 60 × 60) seconds
= 1382400 seconds

S = D ÷ T
= 3000 ÷ 1382400
= 0.00217...
= 2.2×10^{-3} m/s

Multiplier = 100% − 20% = 80% = 0.8

Year 0 £750000
Year 1 £750000 × 0.8 = £600000
Year 2 £600000 × 0.8 = £480000
Year 3 £480000 × 0.8 = £384000
Year 4 £384000 × 0.8 = £307200

The machinary should be replaced after 4 years since it falls below half of its original value (£375000) in this year.

Multiplier = 100% + 3.15% = 103.15% = 1.0315

Value = 134750×1.0315^3
= 147889.2038
= £147900 (4 sig figs)

£ 1 157 818 887 139

= £ 1 158 000 000 000 (4 sig figs)

$$\text{Cost} = N \times 6p$$
$$= 360 \times 6p$$
$$= 2160p$$
$$= £21.60$$

$$\text{Total Charge} = £21.60 + 20\%$$
$$= £21.60 \times 1.2$$
$$= £25.92$$

(or work out 20% of £21.60 and add it on).

$$R = \frac{LW}{H(L+W)}$$

$$= \frac{4.4 \times 3.2}{1.4 \times (4.4+3.2)}$$

$$= 1.32$$

Multiplier = 100% − 15% = 85% = 0.85

4 years.... $0.85^4 = 0.52200625$

The scientists recommendations will not be met since $0.52 > 0.50$

$$D = \frac{1}{3} \times \left(S + \frac{S^2}{20}\right)$$

$$= \frac{1}{3} \times \left(30 + \frac{30^2}{20}\right)$$

$$= 25 \text{ metres}$$

Compare: Last week This week

$\frac{18}{30} = \frac{90}{150}$ $\frac{16}{25} = \frac{96}{150}$

His scoring rate has improved since $\frac{96}{150} > \frac{90}{150}$.

a) $\frac{12}{150} = \frac{2}{25}$

b) $\frac{7}{150}$