What Is It Like To Live Under A Carpet?

Evaluate each formula below for the given values of the variables. Find each answer in the box below and cross out the letters above it. When you finish, the answer to the title question will remain.

LO	VE	ST	AR	RY	RU	DE	GG	ET	ON	ED	UP
2	27	3	12	200	82.6	10	52	4	8	7	16

1. The following formula shows the distance (d) travelled by and object, where s is the speed of the object and t is the time.

   $$d = st$$

   Determine how long it would take for an object to travel 416 m at a speed of 52 m/sec.

2. The following formula shows the volume (V) of a rectangular solid, where L is the length, W is the width, and H is the height.

   $$V = LWH$$

   Determine the length of a rectangular solid with a width of 5 cm, a height of 3.5 cm, and a volume of 210 cm^3.

3. The following formula shows the Perimeter (P) of a rectangle, where L is the length and W is the width.

   $$P = 2(L + W)$$

   Determine the length of a rectangle with a width of 7.5 km and a perimeter of 47 km.

4. The following formula shows the value of an investment V, where P is the original investment, r is the interest rate and t is the time in years.

$$V = P(1 + rt)$$

Determine how long the money was invested for, when $500 is invested at a rate of 0.08 to result in a final investment of $620.

5. The following formula shows the distance d, in metres, of a falling object, where t is the time (in seconds) spent falling.

$$d = 4.9t^2$$

Determine how long an object falls for if it falls 78.4 m.

6. The following formula shows the total Power P in an electrical circuit (in watts), where I is the current (in amps) and R is the resistance (in Ohms).

$$P = I^2R$$

Determine the resistance for a circuit uses 288 watts of power and has a current of 12 amps.

7. The following formula shows the surface area A of a square based prism, where h is the height and w is the width of the base.

$$A = 2w^2 + 4hw$$

Determine the height of the square based prism that has a width of 7 cm and an area of 378 cm^2.