NUMBERS

8.1. Vocabulary

Ex. 1. *Look at the following math actions. Can you name them in English?*

1. +

2. –

3. x

4. :

5. =

Ex. 2. *Look at the expressions below. Read them.*

1. 1 + 3 = 4

2. 10 – 5 = 5

3. 4 x 2 = 8

4. 9 : 3 = 3

5. 6 < 7

8.2. Reading

Ex. 1. *Read the text.*

The Role of Math in Mechanics

Mechanics are not usually associated with mathematics. However, they do use some simple equations when they are fixing cars. Here are a few examples.

1. To work out how much oil to put in an engine

First, they find out the capacity of the engine (in litres). Then they add 0.5 to this number. Finally, they multiply the answer by 1000.

For example, if the engine has a capacity of 2 litres, they would do the following calculation:

2 + 0.5 = 2.5

2.5 x 1000 = 2500

So they would put 2.5 litres of oil in the engine.

2. To work out how many kilometres a car can travel on one litre of petrol

First, they divide the distance travelled (in kilometres) by the amount of petrol used (in litres).

Then they round the answer to one decimal place.

For example, if a car travels 350 km and uses 20 litres of petrol, they would do the following calculation:

350 ÷ 20 = 17.5

So the car can travel 17.5 km on one litre of petrol.

3. To convert miles per hour into kilometres per hour

First, they multiply the speed in miles per hour by 1.6.

For example, if a car is travelling at 60 mph, they would do the following calculation:

60 x 1.6 = 96

So the car is travelling at 96 kph.

4. To work out the area of a tyre

First, they measure the width of the tyre (in centimetres). Then they measure the diameter of the tyre (in centimetres). Next, they multiply the width by the diameter. Finally, they multiply the answer by 0.8.

For example, if the width of the tyre is 20 cm and the diameter is 60 cm, they would do the following calculation:

20 x 60 = 1200

1200 x 0.8 = 960

So the area of the tyre is 960 square centimetres.

Ex. 2. *Answer the questions.*

1. How do mechanics calculate the amount of oil to put in an engine?

2. What equation do mechanics use to determine how many kilometers a car can travel on one liter of petrol?

3. How do mechanics convert miles per hour into kilometers per hour?

4. What steps do mechanics follow to calculate the area of a tire?

5. Why do mechanics add 0.5 to the capacity of the engine when calculating the amount of oil to put in?

6. How do mechanics round the answer when determining how many kilometers a car can travel on one liter of petrol?

7. What unit of measurement is used to express the area of a tire?