

TIME, DISTANCE and SPEED

Note Title

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We can use a triangle to remember the formulae:-



$$D = S \times T$$

$$S = \frac{D}{T}$$

$$T = \frac{D}{S}$$

Examples

- ① A car travels at 45 miles per hour for 3 hours 20 min. How far does it travel?

$$\begin{aligned} D &= 45 \frac{\text{miles}}{\text{hour}} \times 3\frac{1}{3} \text{ hours} \quad (\text{use fractions on calculator}) \\ &= 150 \text{ miles} \end{aligned}$$

3.20 hours is NOT 3.20 hours

- ② A car travels 210 miles at a speed of 50 miles per hour. How long does the journey take?

$$\begin{aligned} T &= \frac{D}{S} \\ &= \frac{210 \text{ miles}}{50 \text{ miles/hour}} \\ &= 4.2 \text{ hours} \\ &= 4 \text{ hours} + \frac{2}{10} \text{ of an hour} \\ &= \underline{\underline{4 \text{ hours } 12 \text{ minutes}}} \end{aligned}$$

- ③ A car travels 30 miles in 25 minutes. What is its speed in miles per hour?

Method 1

$$\begin{aligned} S &= \frac{D}{T} \\ &= \frac{30 \text{ miles}}{25 \text{ minutes}} \\ &= 1.2 \text{ miles per minute} \end{aligned}$$