

SMART EXAM RESOURCES
STAGE 7 MATHEMATICS
TOPIC QUESTIONS
TOPIC: DIRECT PROPORTION
SET-2

1. A car consumes 8 liters of fuel to travel 100 km. How much fuel will it need to travel 250 km?

Solution 1:

Fuel consumption is ****directly proportional**** to distance:

$$8 \div 100 = x \div 250$$

$$x = (8 \times 250) \div 100 = 20 \text{ liters}$$

2. A factory produces 1500 toys in 10 days. How many days will it take to produce 4500 toys at the same rate?

Solution 2:

Production and time are ****directly proportional****:

$$1500 \div 10 = 4500 \div x$$

$$x = (4500 \times 10) \div 1500 = 30 \text{ days}$$

- 3 The speed of a rotating wheel is directly proportional to the applied torque. If the speed is 120 rpm at a torque of 30 Nm, what will be the speed at 50 Nm?

Solution 3:

Speed and torque are ****directly proportional****:

$$120 \div 30 = x \div 50$$

$$x = (120 \times 50) \div 30 = 200 \text{ rpm}$$