GCSE Maths: Rates of pay, unit prices and best buys (Higher): worksheet

GCSE Maths - Units and Compound Measures - Higher - Lesson 16.6

Name: _____ Date: _____ Score: _____

15 questions. Write your answers in the spaces. Answers and step-by-step help are free at **websink.site/gcse/maths/ch16-units-compound-measures/higher/rates-of-pay-unit-prices-and-best-buys/**

Exercise 16H Rates of pay, unit prices and best buys

Calculator allowed

1 **Work out the total pay.**

(a) £8.40 per hour for 25 hours

Answer:

(b) £11.50 per hour for 36 hours

Answer:

(c) £10.25 per hour for 40 hours

Answer:

(d) £9 per hour for 35 hours normal pay plus 5 hours overtime at time and a half

Answer:

2 **Use the unitary method to work out each cost.**

(a) 6 apples cost £2.70. Find the cost of 10 apples.

Answer:

(b) 8 pens cost £5.20. Find the cost of 5 pens.

Answer:

(c) 12 eggs cost £3.00. Find the cost of 30 eggs.

Answer:

(d) 15 litres of petrol cost £22.50. Find the cost of 40 litres.

Answer:

3 **Which is the better buy? Work out the cost per unit for each and compare.**

(a) Cereal: A 375 g for £1.50, or B 750 g for £2.85 (compare the cost per 100 g)

Answer:

(b) Shampoo: A 250 ml for £1.80, B 400 ml for £2.60, C 500 ml for £3.50 (cost per 100 ml)

Answer:

(c) Eggs: 6 for £1.74, 12 for £3.24, 15 for £4.20 (cost per egg)

Answer:

4 **A car uses 6.5 litres of petrol per 100 km. Petrol costs £1.50 per litre. Work out the cost of petrol for a 260 km journey.**

Answer:

5 A tap fills a bath at a rate of 12 litres per minute. The bath needs 90 litres. How long does it take? Give your answer in minutes and seconds.

Answer:

6 Write £3.60 per kg as pence per 100 g.

Answer:

7 Priya earns £18 720 a year. She works 36 hours a week for 52 weeks a year. Work out her pay per hour.

Answer:

8 Tom says: "A bigger pack is always cheaper per gram." Give an example that shows he is wrong.

Answer:

9 A town has 54 000 people living in an area of 18 km^2. (a) Work out the population density in people per km^2. (b) A second town has the same population density and an area of 45 km^2. How many people live there?

> **(a)** Density
>
> Answer:

> **(b)** People in second town
>
> Answer:

10 Paint covers 12 m^2 per litre. A wall is 5.5 m long and 2.4 m high and needs two coats. How many 1-litre tins of paint are needed?

Answer:

11 An appliance uses 2.5 kilowatts (kW) of power. It is used for 3 hours. Electricity costs 28p per kilowatt-hour (kWh), where kWh = kW × hours. Work out the cost.

Answer:

12 Brand X sells 500 ml of juice for £1.10 with "20% extra free". Brand Y sells 450 ml for 90p. Which brand is better value?

Answer:

13 A plumber charges £48 for the first hour and £31 for each further hour. How much does a job lasting 4.5 hours cost?

Answer:

14 A pack of n pencils costs £p. (a) Write an expression for the cost of one pencil in pence. (b) A second pack has $3n$ pencils and costs £$2.4p$. Show that the second pack is better value.

> **(a)** Cost of one pencil
>
> Answer:

> **(b)** Show better value
>
> Answer:

15 Raj is paid £12 an hour for the first 35 hours each week, and time and a half for any hours after that. One week he is paid £528. How many hours did he work?

Answer:

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