## Index Laws

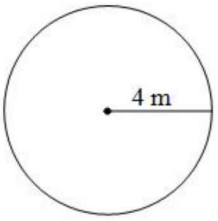
$3x^6 \times 4x^3 =$

$8x^8 \div 4x^3 =$

$(7x^5)^2 =$

$2x^4 \times 3x^4 \div 2x^5 =$

## Area and Circumference

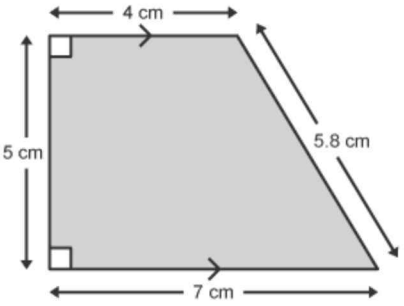



Area =

Circumference =

*Give your answers in terms of* π

## Area of a Trapezium




Area =

## Reverse Percentages

Peter answered 80% of the questions in a test correctly.

He answered 32 of the questions correctly.

Work out the total number of questions in the test.

## Solving Linear Equations

Solve:

$3x + 5 = 5x - 9$

## Write as a Decimal

8% =

¾ =

29.4% =

⅖ =

7/20 =

## Quadratics

**Expand:** (x - 7) (x - 4)

**Factorise and solve:**

$x^2 - 11x + 30 = 0$

## Worded Question

Coffee is sold in 200g jars.

Ben makes 8 cups of coffee a day.

He uses 2g of coffee to make each cup of coffee.

Ben wants to buy enough coffee for 28 days. How many jars of coffee does Ben need to buy?

## Exterior Angles

A polygon has an exterior angle of $30^0$

How many sides does the polygon have?

## Product of Prime Factors

Write 108 as a product of its prime factors.

## Ratio

Ann & Bob shared £240 in the ratio 3:5

Ann gave half of her share to Colin.
Bob gave a tenth of his share to Colin.

What fraction of the £240 did Colin receive?

## Changing the Subject

Make x the subject of the equation:

$$y = \frac{1}{2}x + 3$$

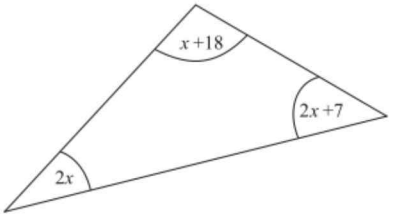
## Error Intervals

A number y is rounded to 3 significant figures

The result is 206
Write down the error interval for y

..... ≤ y < .....

## Forming Equations




Form an equation in terms of x.

Solve and find the value of x.

## Sequences

The nth term of a sequence is:

4n -7

What are the first 5 terms of the sequence?

## Tan Values

Tan(0°) =

Tan(30°) =

Tan(45°) =

Tan(60°) =

## Proportion

**Shortcakes**

Makes **12** shortcakes

| | |
|---|---|
| 50 g | of sugar |
| 200 g | of butter |
| 200 g | of flour |
| 10 *ml* | of milk |

What are the ingredients for 15 shortcakes?

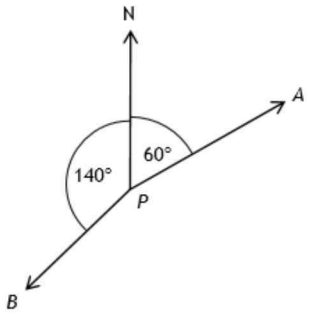
## Simultaneous Equations

Solve the simultaneous equations

5x + 2y = 11

4x - 3y = 18

## Bearings




What is the bearing of P from A?
What is the bearing of P from B?

## Mixed Numbers

$$5\frac{2}{3} - 2\frac{3}{4}$$

## Inequalities

What are the integer values of x that satisfy:

-2 < x < 4

## Standard Form

Work out

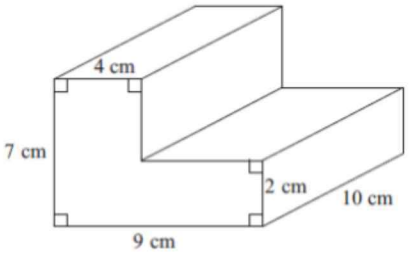
$$(5 \times 10^{4}) \times (6 \times 10^{9})$$

## Probability

The probability of it raining is 0.15

What is the probability of it not raining?

## Surface Area




Volume =

Surface Area =