

## Starter

1. Round to 2 d.p.

a. 3.531

b. 25.2865

c. 5.999

2. Fully factorise

a.  $6p^2 + 21$

b.  $25xy^2 - 50x^3y$

c.  $64a^2b^3c + 24ab^3c^2$

3. What is the probability of picking a blue pencil from a box containing one black, four red and five blue pencils?

4. The households in a street were asked which source of energy they used most. The responses were as follows

a. Oil (6)

b. Gas (12)

c. Electricity (9)

d. Solar (3)

Calculate the angles required in order to create a pie chart.

## Starter

- Round to 2 s.f.
  - 6.824
  - 36.1956
  - 2.898
- Multiply out the brackets and simplify
  - $7(2x - 3) + 8(3x - 5)$
  - $10 - (4g + 2) + 3(3g - 8)$
- Jack cuts a standard pack of playing cards.  
What is the probability he picks
  - a heart?
  - a black card?
  - the seven of diamonds?
- The following information represents the number of presents each child in a nursery received for Christmas:  
12 31 27 21 19 16 23 35 9 14 11 19 20
  - Display the information in an ordered stem and leaf diagram.
  - Find the range, mode and median.

## Starter

1. Round to 1 d.p.

a. 5.949

b. 108.693

c. 3.973

2. Solve the following

a.  $4x - 10 = 2(x + 6)$

b.  $4(2p - 1) - 3(p - 5) - 4 = 0$

3. Kate was given £1 in change from a shop: 50p worth of 5p coins and 50p worth of 2p coins. If she then dropped a coin on the floor, what's the probability it was a 2p coin?

4. On Christmas Day in the Miller household, dad ate  $\frac{1}{4}$  of the turkey, mum ate  $\frac{2}{9}$ , Granny ate  $\frac{1}{12}$ , and David ate  $\frac{1}{6}$ .  
What fraction of the turkey was left for the dog?

## Starter

- Round to 3 s.f.
  - 18.507
  - 547868
  - 0.06709
- If  $f = (-3)$ ,  $g = 6$ , and  $h = 5$ , evaluate the following
  - $gh - 3f$
  - $f^2g - h^2$
  - $(h - g)^3 + 2f$
- Jamie counted the sweets in his tub of Roses and found there were 19 blue wrappers, 18 red and 15 yellow.
  - He offered one to his mum: what's the probability she chose a red wrapper?
  - Mum ate the red sweet. Jamie then offered the tub to his dad. What's the probability that his dad also chose a red sweet?
- Find the height of a right-angled triangle with area =  $2 \text{ m}^2$  and base =  $2\frac{1}{3} \text{ m}$ .

## Starter

1. Find the following

a. 22.5% of £2760

b.  $\frac{3}{7}$  of £8806

2. Calculate

a.  $3\frac{3}{4} - 2\frac{3}{7}$

b.  $4\frac{1}{3} \div 1\frac{1}{6}$

3. Two coins are tossed. What is the probability that both land on heads?

4. A birthday present is placed in a box with a square top and bottom of side 8 cm. The box is  $(2x - 1)$  cm high.

The smallest possible area of paper which just covers the six faces of the box is  $352 \text{ cm}^2$ . Find  $x$ .

