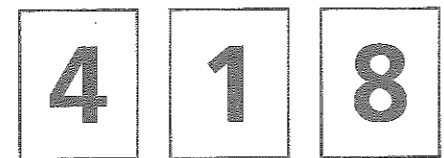## A | Answer

1. Write the product of 15 and 25.   375
2. (84 + 66) ÷ 30 =   5
3. Write in digits 2.57 million.   2 570 000
4. Divide £45 in the ratio 2:7.   £10 : £35
5. Increase 20 by 20%.   24
6. 0.083 + 3.08 =   3.163
7. (1.25 × 5) − (1.25 ÷ 5) =   6
8. Approximate 1.603 to
   a 2 decimal places   a 1.60
   b the nearest tenth.   b 1.6
9. Estimate to the nearest ten.
   28.6 × 3.22   90
10. If $x = 2$, $y = 3$, $z = 5$,
    evaluate $5x + 3y − 2z$.   9
11. $10x + 10 = 100$ so $x =$ 9
12. What is the smallest number that is
    exactly divisible by both 6 and 8?   24

B | Answer

1. How many bags of crisps costing
   40p each can I buy for £12?   30
2. A t-shirt at £10.50 is reduced by
   $33\frac{1}{3}$%. How much do I pay?   £7
3. 1 foot = 12 inches. $28\frac{1}{2}$in =   2ft $4\frac{1}{2}$in
4. $3\frac{1}{2}$ft =   in   42in
5. A TV programme lasts $1\frac{1}{4}$ hours.
   It begins at 6.50 p.m. At what time
   does it finish?   8.05 p.m.
6. If 1l of water has a mass of 1kg,
   what is the volume in cm³ of 1g
   of water? Note: 1l = 1000cm³   1cm³
7. Find the perimeter of a rectangular
   room 2.8m wide and 3.5m long.   12.6m
8. 3cm 5cm 4cm
   This triangle is
   enlarged by the scale
   factor 3. Find the
   perimeter of the
   new shape.   36cm
9. What is the number of axes
   of symmetry of a square?   4
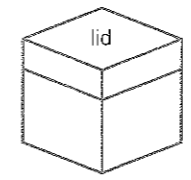10. Find 20% of £14.99 to the
    nearest £1.   £3

C | Answer

Luke and Iram share a set of six number cards. Each card has
a single digit on it.

Luke's three
cards are: 4 1 8

and Iram's
cards are: 5 2 3

Help Luke and Iram to arrange their cards to answer the
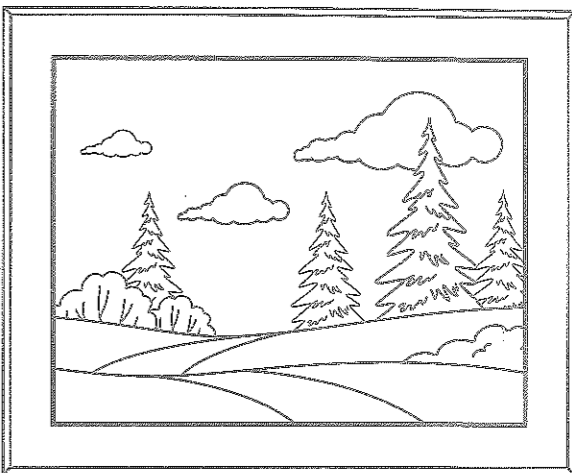following questions.

1. What is the smallest three-digit
   number Luke can make?   1 4 8
2. What is the largest three-digit
   number Iram can make?   5 3 2
3. What is the largest three-digit even
   number Luke can make?   8 1 4
4. What is the smallest three-digit even
   number Iram can make?   3 5 2
5. What is the largest number exactly
   divisible by 5 that Iram can make?   3 2 5
6. Which two cards can Luke use to
   show a square number?   8 1
7. Which two cards can Iram use to
   show a power of two?   3 2
8. What is the largest prime number Iram
   can make with two of her cards?   5 3
9. What is the difference between Luke's
   largest three-digit number and Iram's
   smallest three-digit number?   606
10. What is the sum of Luke's smallest
    three-digit odd number and Iram's
    largest three-digit even number?   1013
11. Luke makes the smallest two-digit odd
    number he can. He then multiplies this
    number by the digit remaining on his
    third card. What answer does he get?   328
12. Iram makes the largest two-digit even
    number she can. She then divides this
    number by the digit remaining on her
    third card. What remainder
    does she get?   r 1

A | Answer

1. 500 000 + 500 ÷ 5 =   500 505
2. Write down
   a the quotient and   a 6
   b the remainder when
      56 is divided by 9.   b 2
3. $2 × 2 × 2 × 2 × 2 = 2^x$. Find x.   5
4. Express 0.25 as a fraction in its
   simplest form and as a percentage.   a $\frac{1}{4}$ b 25%
5. What is $\frac{2}{5}$ of 40?   16
6. 0.05 × 45 =   2.25
7. $\frac{2}{5} ÷ 12 =$ $\frac{1}{30}$
8. Approximate 112.345 to
   a 2 decimal places   a 112.35
   b the nearest ten.   b 110
9. Estimate to the nearest ten. $\frac{305 × 21}{44}$ 150
10. If $a = 3$, $b = 5$, evaluate $a^2 + b$.   14
11. $\frac{t+2}{5} = 4$ so $t =$ 18
12. Express 30 as a product of prime
    numbers by filling in the blanks. $2 × 3 × 5 = 30$

B | Answer

1. How many peaches costing 30p
   each can I buy for £10.50?   35
2. I buy a table for £120 with eight
   equal instalments. How much is
   each payment?   £15
3. 3ft = 1yd. 7yd =   ft   21ft
4. 3yd =   in   108in
5. The 11:17 train to London arrives
   at 14:03. How long does the
   journey take?   2h 46min
6. Find in millimetres the circumference
   of a circle with a radius of 50mm.
   π = 3.14   314mm
7. A glass sheet 6mm thick measures
   110cm by 40cm. Find its volume
   in cm³.   2640cm³
8. A square with sides of 4cm is enlarged
   by the scale factor 2. What is the
   area of the new square?   64cm²
9. lid   A box has a square lid.
   In how many ways
   can the lid be turned
   so that it still fits
   the box?   4
10. Approximate 2940m to the
    nearest kilometre.   3km

C | Answer

Harriet has five large photographs she wants to mount and
frame. Each photograph measures 400mm by 300mm and is
stuck onto a piece of mounting card measuring 500mm by
400mm. The mounting card and photo will then be placed
under the glass in a wooden frame.

1. What is the size in metres of each
   piece of mounting card?   0.5m by 0.4m
2. What is the area in m² of each piece
   of mounting card?   0.2m²
3. Each photo is stuck to the middle of
   the mounting card so as to give a
   border of equal width on all four
   sides. How many millimetres wide is
   this border?   50mm
4. How many pieces of mounting
   card can be cut from a full sheet
   measuring 841mm by 594mm?   2
5. How many full sheets of card will
   Harriet need to buy in order to
   mount all five photos?   3
6. If a full sheet of card costs £2.35
   how much will it cost Harriet to buy
   enough full sheets for all five photos?   £7.05
7. Harriet orders some glass the same
   size as each piece of mounting card.
   What is the area in m² of each
   piece of glass?   0.2m²
8. If glass costs £11.20 per m² how
   much will each piece cost?   £2.24
9. How much will it cost to buy the
   glass for all five photos?   £11.20
10. What length of wooden beading will
    be needed to make each frame?
    Add on 10% extra from wastage.   1.98m
11. The beading costs £3.15 per 2m length.
    How much will it cost to buy enough
    beading for all five frames?   £15.75
12. What is the total cost for Harriet to
    frame all five photos?   £34.00