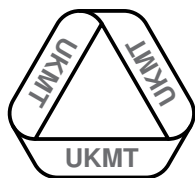


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A1

Calculate

$$555 + 777 + 888.$$

Pass on the *sum of the digits* of your answer.

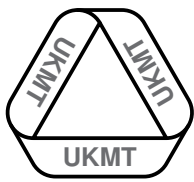
A3

T is the number you will receive.

A linear sequence is

$$6, 10, 14, 18, 22, \dots$$

Pass on the value of the $(4T)$ th term of the sequence.

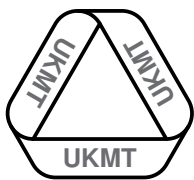


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A2

T is the number you will receive.

k is a positive number that satisfies the equation

$$k^2 = T^2 + 8^2.$$

Pass on the value of *k*.

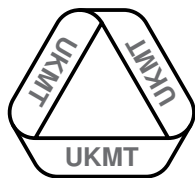
A4

T is the number you will receive.

One angle in a quadrilateral is T° .

The remaining three angles are in the ratio 1 : 2 : 3.

Write down the size of the smallest angle, in degrees.

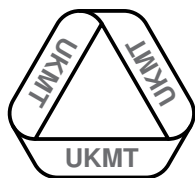


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B1

Michael has n sweets.

James has twice as many sweets as Michael.

Kelly has three more sweets than James.

In total they have 43 sweets.

Pass on how many sweets Michael has.

B3

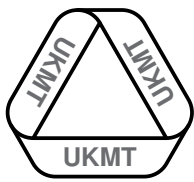
T is the number you will receive.

The value of

$$\frac{T}{63} - \frac{T}{64}$$

can be written as a fraction $\frac{A}{B}$, written in its lowest terms.

Pass on the value of $A \times B$.

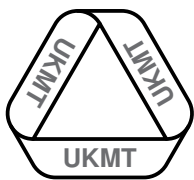


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B2

T is the number you will receive.

$$8 \times 15 \times 16 \times 30 \times T = 40 \times 12 \times 24 \times 20 \times K.$$

Pass on the value of *K*.

B4

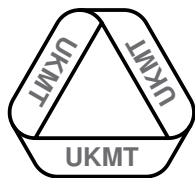
T is the number you will receive.

Lynn thinks of a number. She then performs these calculations in order:

- add 3
- multiply by 5
- subtract 13
- multiply by 2
- add 6
- divide by 10.

She gets the answer *T*.

Write down the value of Lynn's original number.

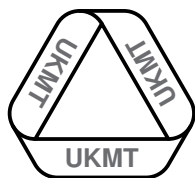


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C1

A set of five positive integers has mean 9, median 8 and mode 7.

Pass on the largest possible integer in the set.

C3

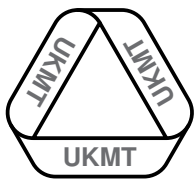
T is the number you will receive.

Ben's class were surveyed to find out if they liked English, Maths, both, or neither.

Out of the 30 pupils:

17 people said they liked Maths;
14 people said they liked English; and
T people said they liked neither Maths nor English.

Pass on the number of pupils in Ben's class who liked *both* Maths and English.



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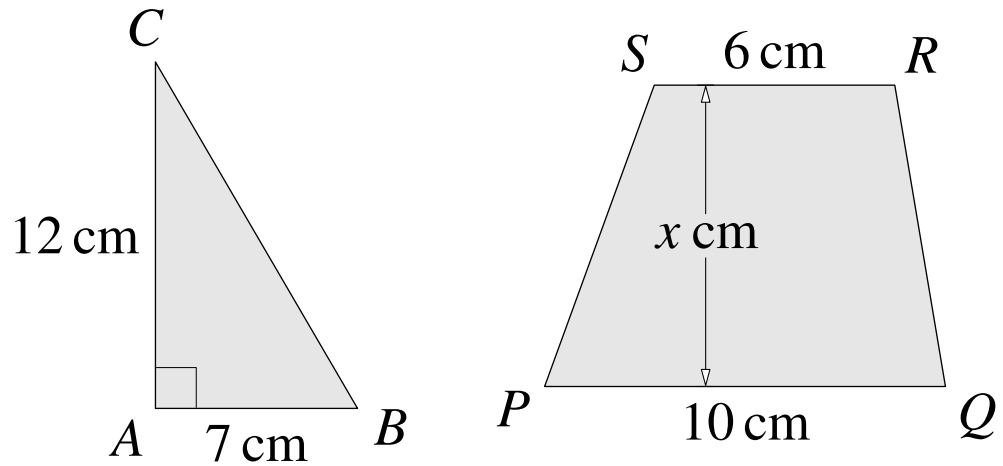
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T is the number you will receive.

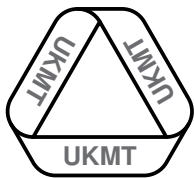
C2

The area of triangle ABC is $T \text{ cm}^2$ less than the area of trapezium $PQRS$.



Pass on the value of x .

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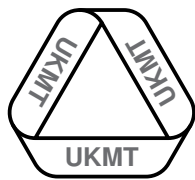
T is the number you will receive.

C4

A large crate has dimensions $2 \text{ m} \times 2 \text{ m} \times 1 \text{ m}$.

Write down how many boxes with dimensions $10 \text{ cm} \times T \text{ cm} \times 5 \text{ cm}$ will fit into the crate.

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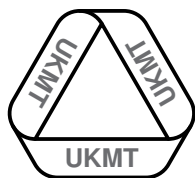


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D1

X is a positive integer.

$$X^2 = 8^2 - 7^2 + 6^2 - 5^2 + 4^2 - 3^2 + 2^2 - 1^2.$$

Pass on the value of X .

D3

T is the number you will receive.

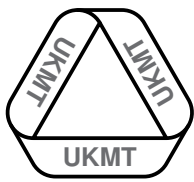
Miss Watkins has a set of stickers, each of which is either red, green or blue, to give out to her class.

The ratio of red stickers to green stickers is 4 : 3.

The ratio of green stickers to blue stickers is 2 : 3.

Miss Watkins has T red stickers.

Pass on the number of blue stickers she has.

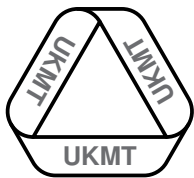


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D2

T is the number you will receive.

H is the Highest Common Factor of 240 and $108T$.

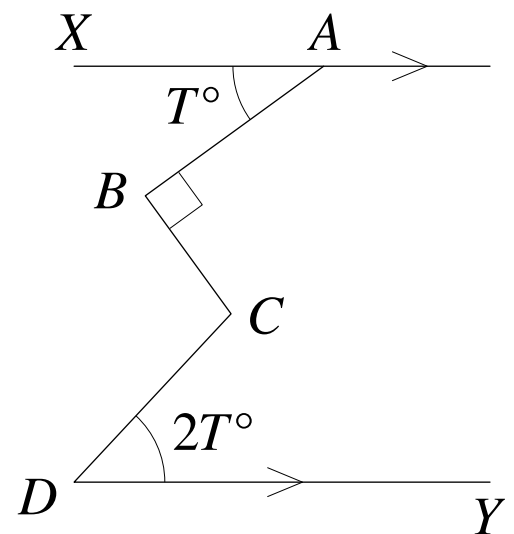
Pass on the value of H .

D4

T is the number you will receive.

In the diagram, lines XA and DY are parallel and lines AB and BC are perpendicular.

Angle BAX equals T° and angle CDY equals $2T^\circ$.



Write down the size, in degrees, of *reflex* angle DCB .

TEAM NUMBER

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<p>A1</p> <p style="text-align: right;">0 1 3</p>	<p>B1</p> <p style="text-align: right;">0 1 3</p>	<p>C1</p> <p style="text-align: right;">0 1 3</p>	<p>D1</p> <p style="text-align: right;">0 1 3</p>
<p>A2</p> <p style="text-align: right;">0 1 3</p>	<p>B2</p> <p style="text-align: right;">0 1 3</p>	<p>C2</p> <p style="text-align: right;">0 1 3</p>	<p>D2</p> <p style="text-align: right;">0 1 3</p>
<p>A3</p> <p style="text-align: right;">0 1 3</p>	<p>B3</p> <p style="text-align: right;">0 1 3</p>	<p>C3</p> <p style="text-align: right;">0 1 3</p>	<p>D3</p> <p style="text-align: right;">0 1 3</p>
<p>A4</p> <p style="text-align: right;">0 1 3</p>	<p>B4</p> <p style="text-align: right;">0 1 3</p>	<p>C4</p> <p style="text-align: right;">0 1 3</p>	<p>D4</p> <p style="text-align: right;">0 1 3</p>

BONUS 3

BONUS 3

BONUS 3

BONUS 3

A TOTAL /15

B TOTAL /15

C TOTAL /15

D TOTAL /15

Circle the mark awarded for each question and cross out the others.
 At the end of the round, either circle the bonus mark or cross it out.

FINAL SCORE /60