Name:_____ Class:_____

- Complete all answers on this question paper.
- Calculators may not be used.

1. Which is the larger number? *Tick the correct option.*

☐ $1\frac{1}{5}$ ☐ $1\frac{1}{7}$ (1)

2. Write $\frac{3}{10}$ as a percentage. _____ (1)

3. Without doing any calculating, determine whether this statement is true or false. *Tick the correct option.*

$$\left(\frac{1}{2} - \frac{1}{3}\right) - \frac{1}{4} = \frac{1}{2} - \left(\frac{1}{3} - \frac{1}{4}\right)$$

☐ True ☐ False (1)

4. Which number is a multiple of 7? *Tick the correct option.*

☐ 45 ☐ 47 ☐ 49 ☐ 50 ☐ 51 (1)

5. How many 0,25s are there in 2? (1)

6. Complete. *Fill in the answer only.*

a) 13,28 + 10,57 = _____ (1)

b) 18 – (12 – 6) = _____ (1)

c) $\frac{1}{4}$ × R28,88 = ____ (1)

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7. Calculate. *Show your working.*

a) $7\frac{5}{16} - 2\frac{1}{2}$

(2)

b) 15% of R480

(2)

8. John had a stock of 1 000 sweets in his shop. He sold 75 on Monday, 53 on Tuesday, 64 on Wednesday, 78 on Thursday and 130 on Friday. What percentage of the sweets were not sold? *Show your working.*

_____% (2)

9. Mbali spent $\frac{4}{5}$ of her savings on furniture and the rest on a TV. If the TV cost her R200, what were her original savings? *Show your working.*

R_____ (2)

10. Study the sequence.

2 ; 5 ; 10 ; 17 ; 26 ; 37 ; _____

a) What is the next (7th) term in the sequence? (1)

b) Explain how you determined the next term in the sequence. (1)

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11. Use the table to determine the rule for A and B in the flow diagram.

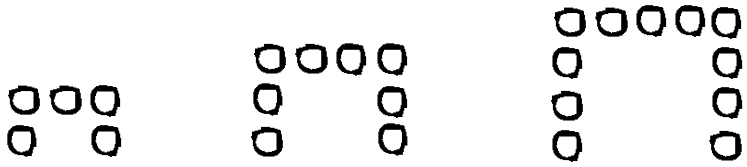
Input	1	2	3	4	5	10
Output	4	7	10	13	16	31

Input → A → B → Output

A: _____

B: _____ (2)

12. Archie draws pictures with dots like this. The first three pictures make a pattern.



Picture 1 Picture 2 Picture 3

a) How many dots will there be in Picture 5? (1)

b) Explain how you would calculate the number of dots in Picture 25.

(1)

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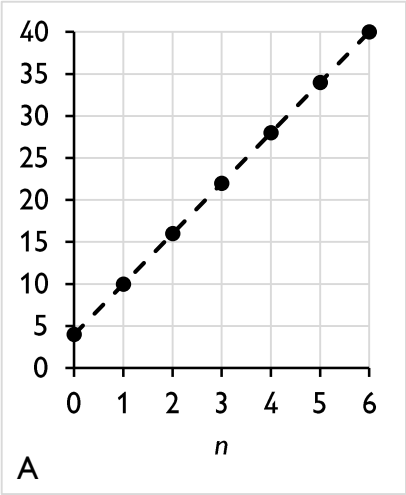
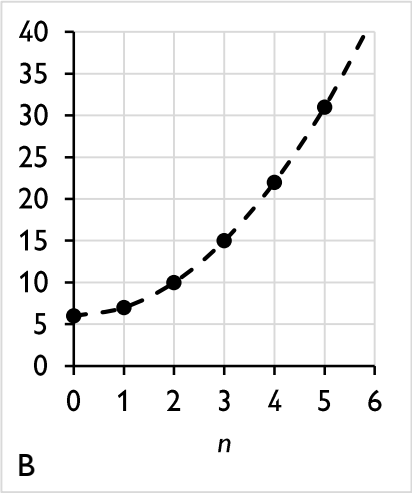
13. Which graph best represents the relationship in the table? *Tick the correct option.*

n	1	2	3	4	5	6
	10	16	22	28	34	40





☐ A ☐ B (1)

14. Use the flow diagram to determine the value of A and B in the table.

Input → × 5 → + 2 → Output

Input	9	10	15	B	30
Output	A	52	77	102	152

A: _____

B: _____ (2)

15. Write a formula that is equivalent to the flow diagram. Your formula should start with b =

a → -1 → $\times 4$ → b

(1)

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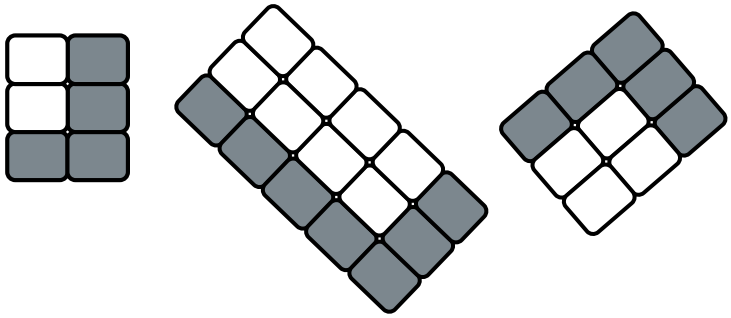
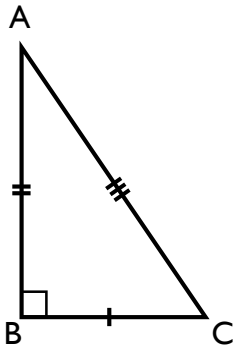
16. Luthando makes arrangements with tiles like this. The arrangements form a pattern.



Determine a formula that can be used to calculate the number of grey tiles for any number of white tiles in an arrangement. Use the letters *a* for the white tiles and *b* for the grey tiles. Your formula should start $a = \ldots$ (2)

17. Which descriptions of the triangle are correct for this shape? *Tick all correct options.*



- ☐ Acute-angled
- ☐ Right-angled
- ☐ Obtuse-angled
- ☐ Scalene
- ☐ Isosceles
- ☐ Equilateral

(1)

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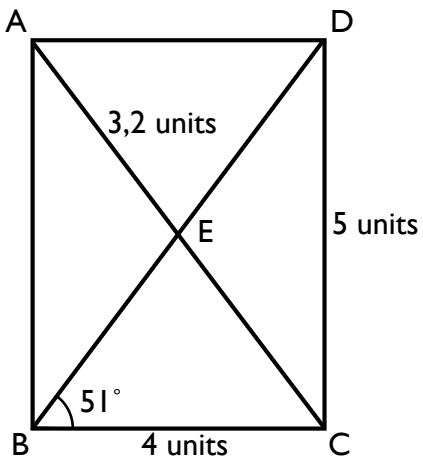
18. *ABCD* is a rectangle with diagonals *AC* and *BD* intersecting at *E*. *BC* = 4 units, *CD* = 5 units and *AE* = 3,2 units.



a) Determine the length of *AB*.

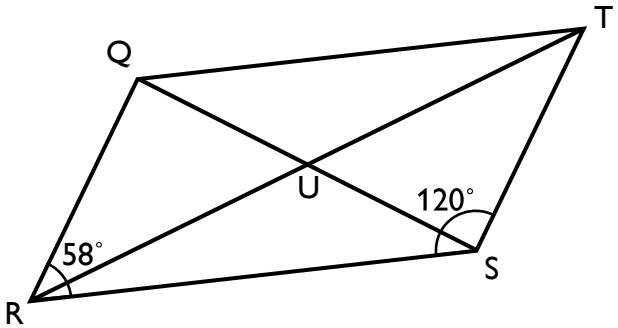
_____units (1)

b) Determine the length of *EC*.

_____units (1)

19. *QRST* is a parallelogram with diagonals intersecting at *U*. $Q\hat{R}S = 58°$ and $R\hat{S}T = 120°$.

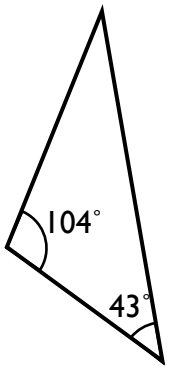
Determine the size of $R\hat{Q}T$.



_____° (1)

20. Calculate the size of the missing angle. *Show your working.*

_____°



(2)

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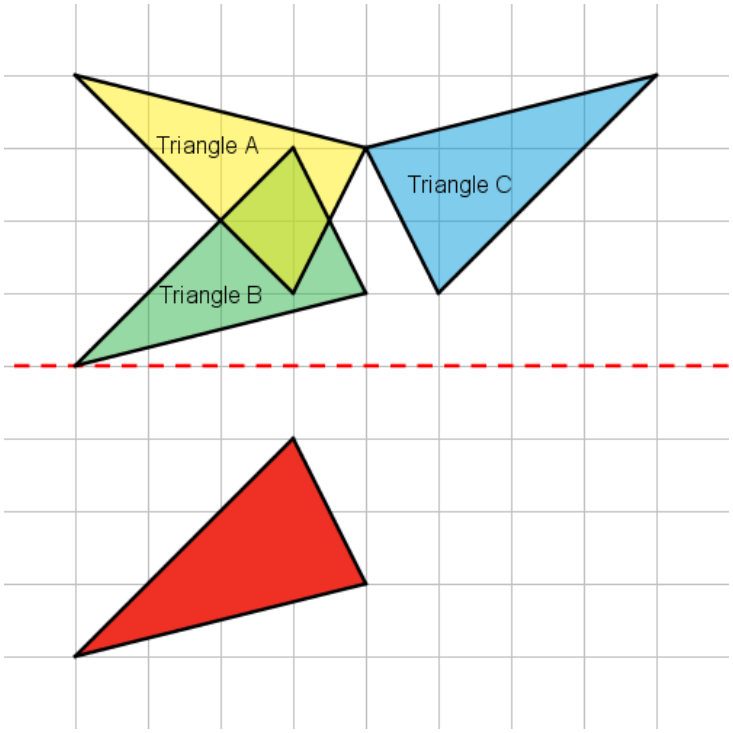
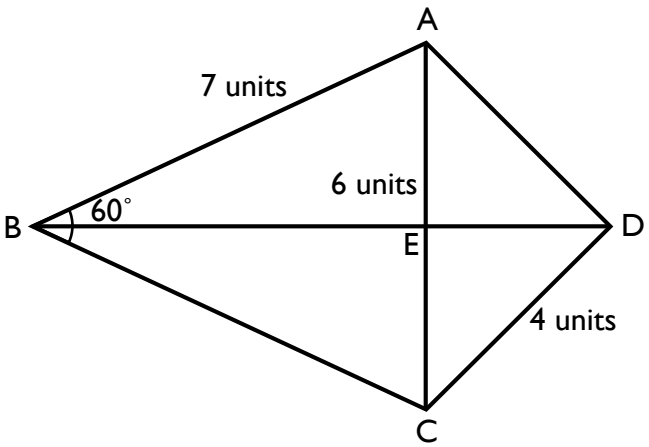
21. Which triangle, A, B or C, is the image of the triangle at the bottom from the reflection about the dotted line? *Tick the correct option.*



☐ Triangle A ☐ Triangle B ☐ Triangle C (1)

22. *ABCD* is a kite with diagonals *BD* and *AC*.
AC = 6 units,
AB = 5 units and
CD = 4 units.
$C\hat{B}A = 60°$.



a) Determine the lengths of *AE* and *AD*.

AE = _____ units

AD = _____ units (2)

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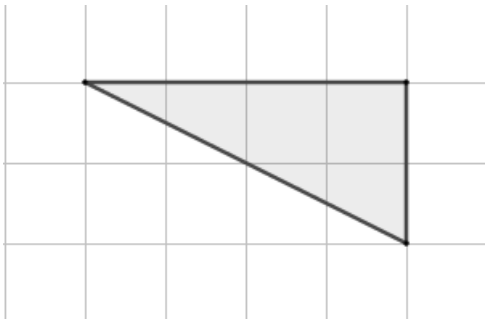
b) Calculate the size of $B\hat{A}E$. *Show your working.*

_____° (2)

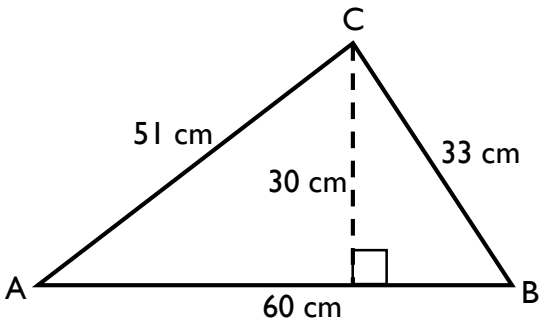
23. Determine the area of the triangle.



_____ square units

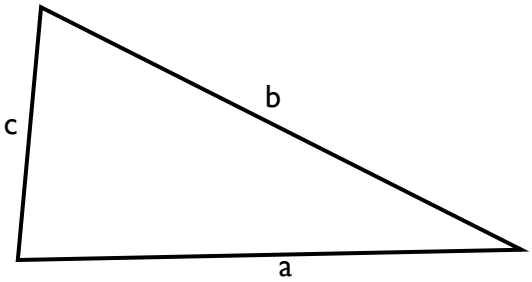
(1)

24. Determine the area of ΔABC. *Show your working.*



_____cm^2 (2)

25. The perimeter of a triangle is 35 cm. Side *a* is 1 cm more than twice side *c*. Side *b* is *1* cm less than four times side *c*. Calculate the length of the three sides. *Show your working.*



_____cm (3)

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26. There are seven trees in Steve's garden. Their ages are 11; 25; 27; 20; 24; 15 and 18 years. What is the median age of the trees? *Show your working.*

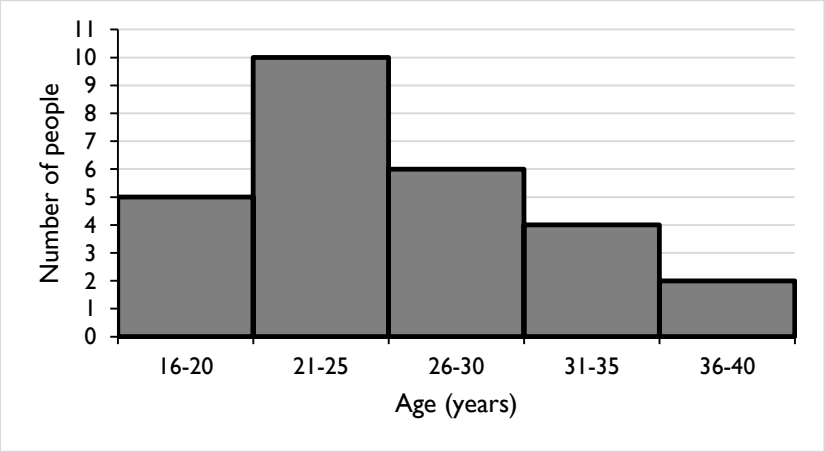
_____ years (2)

27. The heights, in centimetres, of eight children is given. Calculate the mean height of the children. *Show your working.*

160	150	160	120	140	110	130	170

_____cm (2)

28. This histogram shows information about the ages of people at the Fit and Fabulous club.



What is the median age? *Tick the best option.*

☐ 20 years ☐ 22 years ☐ 28 years

☐ 30 years ☐ 31 years (1)

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