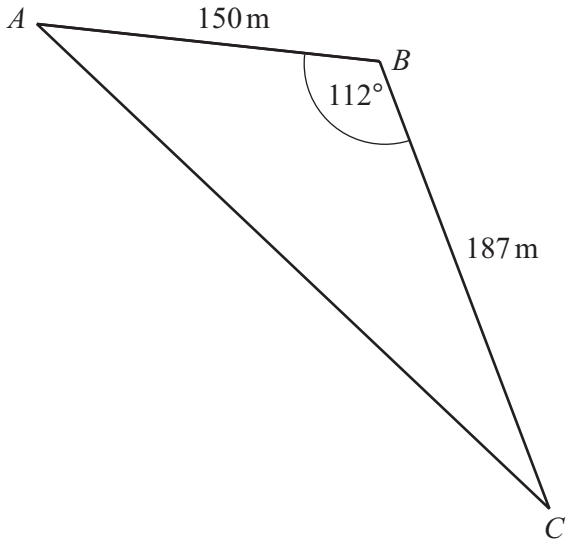
1. Question | 4024 May-June 2025 P2 V2 Q22

22



NOT TO SCALE

The diagram shows a triangular field ABC.
$AB = 150\,\text{m}$, $BC = 187\,\text{m}$ and angle $ABC = 112°$.

(a) Fencing is needed for the perimeter of the field.
Fencing is sold in rolls of length 20 m.

Calculate the number of rolls of fencing needed.

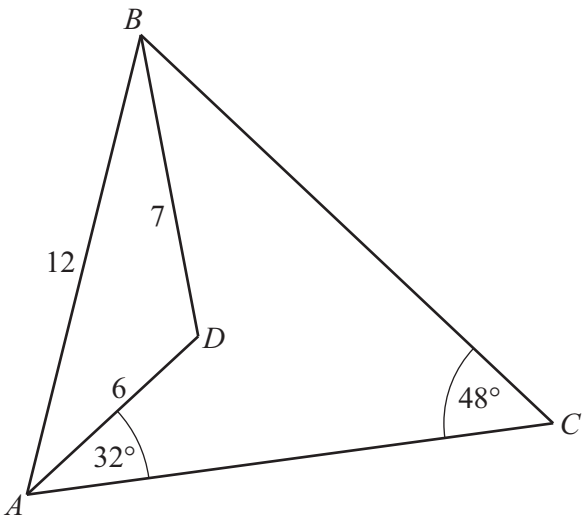
..... [5]

(b) Calculate the shortest distance from B to AC.

..... m [4]

2. Question | 4024 May-June 2025 P2 V3 Q19

19 The diagram shows triangle ABC and triangle ABD.



NOT TO SCALE

$AB = 12\,\text{cm}$, $BD = 7\,\text{cm}$ and $AD = 6\,\text{cm}$.
Angle $DAC = 32°$ and angle $BCA = 48°$.

(a) Calculate angle BAD.

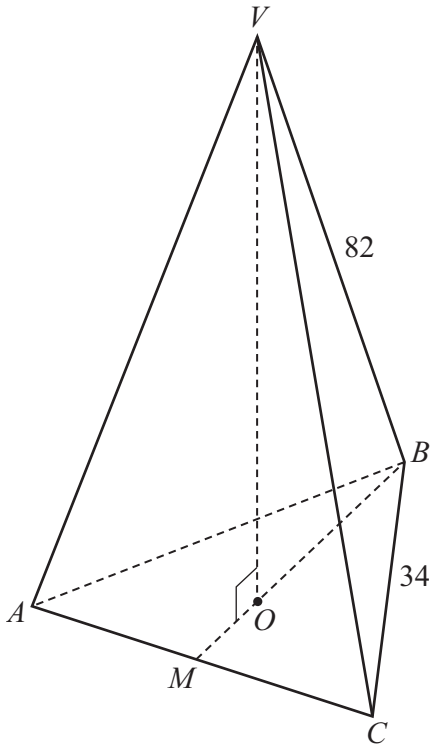
Angle $BAD =$ ..... [4]

(b) Calculate AC.

$AC =$ ..... cm [4]

3. Question part 1/2 | 4024 May-June 2025 P2 V3 Q22

22 The diagram shows a pyramid $ABCV$.



NOT TO SCALE

The base of the pyramid is an equilateral triangle, ABC, with sides of length 34 cm.
The height VO is perpendicular to the base of the pyramid.
$VA = VB = VC = 82$ cm.

(a) Write down the number of planes of symmetry of the pyramid.

..... [1]

(b) M is the midpoint of AC.
The ratio $MO : OB$ is $1 : 2$.

(i) Show that $OB = 19.6$ cm correct to 1 decimal place.

[3]

3. Question part 2/2 | 4024 May-June 2025 P2 V3 Q22

(ii) Calculate the angle between the edge VB and the base of the pyramid.

..... [2]

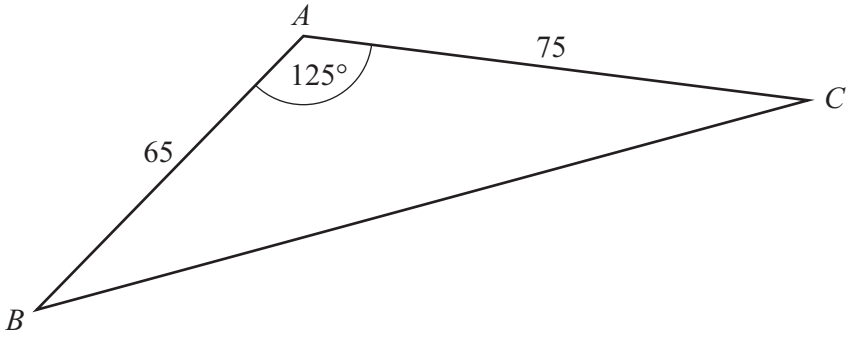
(iii) Calculate the volume of the pyramid.

..... cm^3 [5]

Question 23 is printed on the next page.

4. Question | 4024 Oct-Nov 2025 P2 V1 Q20

20



NOT TO SCALE

The diagram shows a triangular field, ABC.
$AB = 65$ m, $AC = 75$ m and angle $CAB = 125°$.

(a) Show that $BC = 124.3$ m, correct to 1 decimal place.

[3]

(b) Calculate angle ABC.

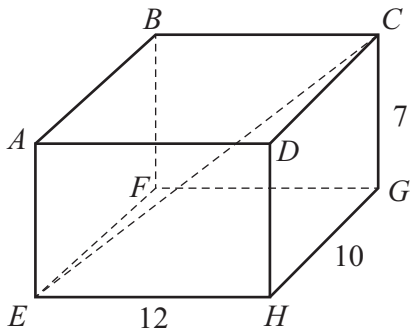
Angle $ABC =$ ..... [3]

(c) Calculate the shortest distance from A to BC.

..... m [3]

5. Question | 4024 Oct-Nov 2025 P2 V1 Q25

25 The diagram shows a cuboid.



NOT TO SCALE

$EH = 12$ cm, $HG = 10$ cm and $GC = 7$ cm.

(a) Show that $CE = 17.1$ cm, correct to 1 decimal place.

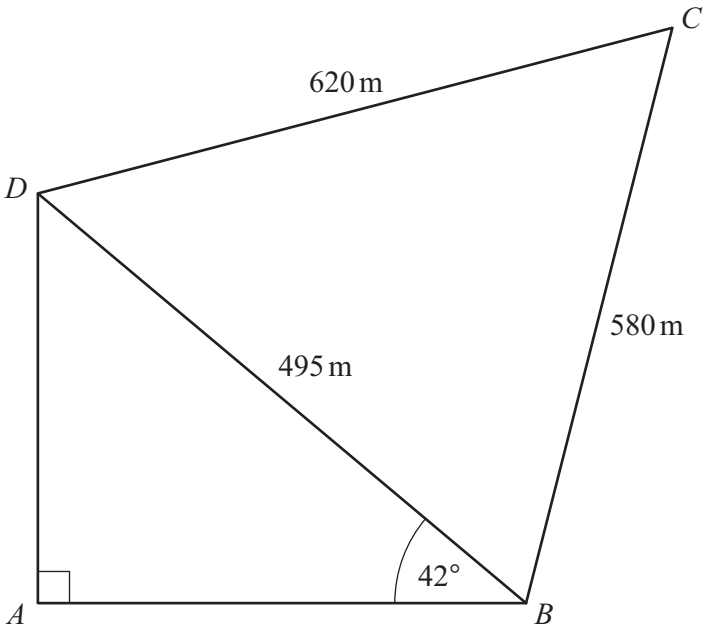
[3]

(b) Calculate the angle between the line CE and the base $EFGH$.

..... [3]

6. Question part 1/2 | 4024 Oct-Nov 2025 P2 V2 Q22

22 $ABCD$ is a field.
A straight path crosses the field from B to D.



NOT TO SCALE

(a) Calculate AB.

$AB =$ ..... m [2]

(b) Show that angle $BDC = 61.5°$, correct to 1 decimal place.

[3]

6. Question part 2/2 | 4024 Oct-Nov 2025 P2 V2 Q22

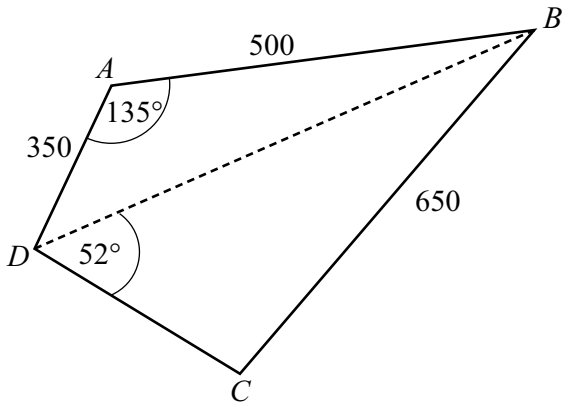
(c) A second path crosses the field from C to meet path BD at point X.
CX is the shortest distance from C to BD.

Lara takes 6 minutes 24 seconds to walk along path CX.

Calculate Lara's average speed.
Give your answer in kilometres per hour.

..... km/h [5]

19



NOT TO SCALE

$ABCD$ is a quadrilateral with $AB = 500$ m, $BC = 650$ m and $DA = 350$ m.
Angle $DAB = 135°$ and angle $BDC = 52°$.

(a) Calculate DB.

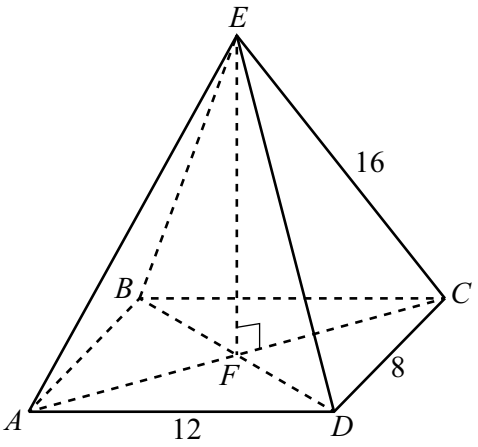
$DB =$ ..... m [3]

(b) Calculate the obtuse angle BCD.

Angle $BCD =$ ..... [4]

8. Question | 4024 Specimen 2025 P2 Q24

24



ABCDE is a rectangular-based pyramid.
AC and *BD* intersect at *F*.
EF is perpendicular to *FC*.

AD = 12 cm, *DC* = 8 cm and *EC* = 16 cm.

(a) Write down the number of planes of symmetry of the pyramid.

..... [1]

(b) Show that *EF* = 14.3 cm correct to 1 decimal place.

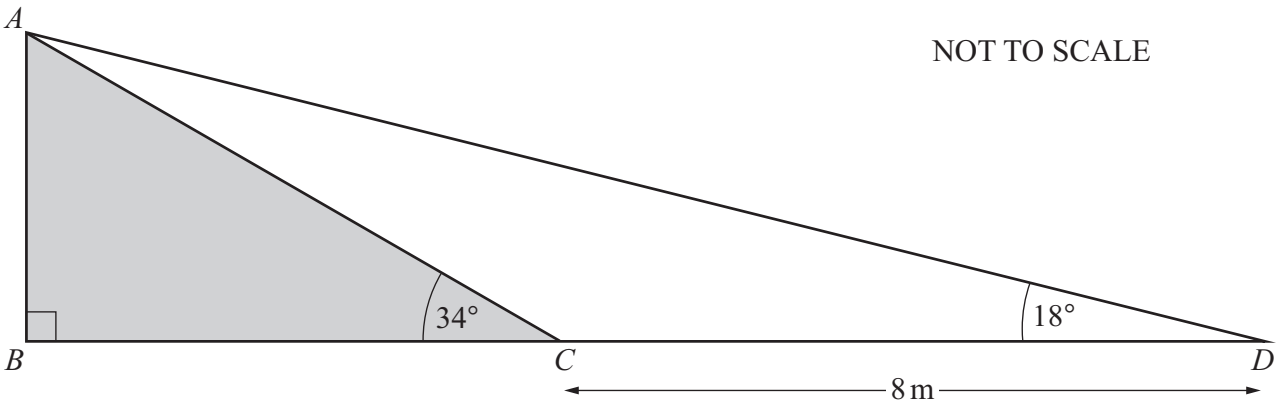
[4]

(c) Calculate the angle between the line *EC* and the base *ABCD*.

..... [2]

9. Question | 4024 May-June 2026 P2 V2 Q22

22 The diagram shows a triangular garden ABD.
A path from A meets BD at point C.



$CD = 8\,\text{m}$, angle $ADC = 18°$, angle $ACB = 34°$ and angle $ABC = 90°$.

(a) Calculate the area of triangle ABC.

..... m^2 [6]

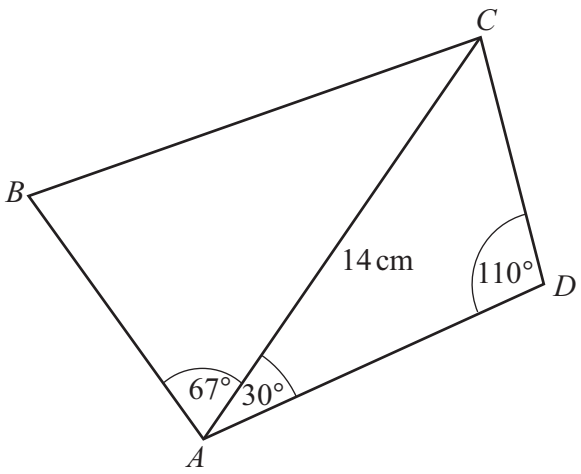
(b) The shaded area ABC is covered with grass seed.
A box of grass seed costs \$6.
Each box contains enough grass seed to cover an area of $5\,\text{m}^2$.

Calculate the total cost of the boxes needed to cover this area with seed.

\$ ..... [2]

10. Question | 4024 May-June 2026 P2 V3 Q19

19 The diagram shows quadrilateral $ABCD$.



NOT TO SCALE

(a) Calculate AD.

..... cm [3]

(b) The area of triangle ABC is $50.9\,\text{cm}^2$.

Show that $AB = 7.9\,\text{cm}$, correct to 1 decimal place.

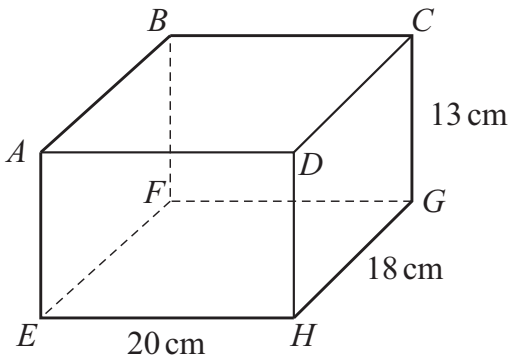
[2]

(c) Calculate BC.

..... cm [3]

11. Question | 4024 May-June 2026 P2 V3 Q21

21 The diagram shows a cuboid.



NOT TO SCALE

Calculate the angle between EC and the face $ABFE$.

..... [4]