GEOMETRY

1) Find the angles X, Y and Z: (1 point)

   a) 
   b) 

2) Find the angle X: (1.5 points)

   a) 
   b) 
   c) 

3) Complete: (1.5 points)

   a) 8.72 km = m 
   b) 825 cm² = m² 
   c) 1.85 dam = km 
   d) 2087 km² = hm² 
   e) 1372 mg = g 
   f) 25 kg = g 
   g) 0.321 kg = mg 
   h) 16 dL = L 

4) The legs of an isosceles right triangle are 7 cm long. Find the length of the hypotenuse (in millimetres). (1 point)

5) Calculate the perimeter of this trapezoid in decimetres (round to the nearest tenth). (1.25 points)

   a) 9 cm 
   b) 6 cm 
   c) 15 cm 

6) Find the missing diagonal of this rhombus in centimetres. (1.25 points)
### 7) Complete:

(1 point)

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### 8) Draw the axes of reflection symmetry in each picture of exercise 7 (1.5 points)
1) Find the angles X, Y and Z:

a) \( X = 41^\circ, \ Y = 41^\circ, \ Z = 180 - 41 = 139^\circ \)

b) \( X = Y = 144^\circ / 2 = 72^\circ \) each; \( Z = 360 - 144 = 216^\circ \)

2) Find the angle X:

a) \( X = 90^\circ - 60^\circ 20' = 29^\circ 40' \)

b) \( X = 360^\circ - 90^\circ - 80^\circ 30' - 66^\circ = 123^\circ 30' \)

c) Regular Hexagon \( \rightarrow (n-2)180 = 4 \cdot 180 = 720^\circ \rightarrow X = 720 / 6 = 120^\circ \)

3) Complete:

| a) 8.72 km = 8720 m | b) 825 cm² = 0.0825 m² |
| c) 1.85 dam = 0.0185 km | d) 2087 km² = 208700 hm² |
| e) 1372 mg = 1.372 g | f) 25 kg = 25000 g |
| g) 0.321 kg = 321000 mg | h) 16 dL = 1.6 L |

4) The legs of an isosceles right triangle are 7 cm long. Find the length of the hypotenuse (in millimetres).

\[
a^2 = 7^2 + 7^2 = 49 + 49 = 98
\]

\[
a = \sqrt{98} = 9.8994949 \text{ cm}
\]

Solution: The hypotenuse is 98.99 mm long
5) Calculate the perimeter of this trapezoid in decimetres (round to the nearest tenth).

\[ a^2 = 6^2 + 6^2 = 36 + 36 = 72 \]
\[ a = \sqrt{72} = 8.48528 \rightarrow a = 8.5 \text{ cm} \]
\[ P = 9 + 6 + 15 + 8.5 = 38.5 \text{ cm} \]
Solution: The perimeter is 3.85 dm

6) Find the missing diagonal of this rhombus in centimetres.

\[ b^2 = 1.68^2 - 1.5^2 = 0.5724 \]
\[ b = \sqrt{0.5724} = 0.75657 \text{ m} \]
\[ \text{diagonal} = 2 \cdot 0.75657 = 1.51314 \text{ m} \]
Solution: the diagonal is 151.314 cm long

7) Complete:

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8) Draw the axes of reflection symmetry in each picture of exercise 7 ↑