Maths Answers – Area

Maths Challenge 1:

Topic: Area	Page 129

A.

(a) 22cm^2 (b) 26cm^2

(c) 10cm^2 (d) 9cm^2

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A.

1. Length = 4cm
   Width = 3cm
   There are 3 rows of 4cm
   Area = 12cm^2
2. Length = 4cm
   Width = 2cm
   There are 2 rows of 4cm
   Area = 8cm^2
3. Length = 3cm
   Width = 3cm
   There are 3 rows of 3cm
   Area = 9cm^2

B.

1. 8cm^2 2. 30cm^2 3. 35cm^2

4. 80cm^2 5. 36cm^2 6. 8cm^2

7. 24cm^2 8. 55cm^2 9. 34cm^2

Maths Challenge 2:

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B.

1.(a) 14cm (b) 14cm (c) 14cm
2.(a) $6cm^2$ (b) $12cm^2$ (c) $10cm^2$

C.

1. (a) A = $32cm^2$ P = 24cm
   (b) A = $11cm^2$ P = 24cm
   (c) A = $27cm^2$ P = 24cm
2. (a) A = $24cm^2$ P = 28cm
   (b) A = $40cm^2$ P = 28cm
   (c) A = $49cm^2$ P = 28cm
3. (a) A = $50cm^2$ P = 30cm
   (b) A = $56cm^2$ P = 30cm
   (c) A = $36cm^2$ P = 30cm

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A.

1. $24cm^2$ 2. $30cm^2$ 3. $32cm^2$
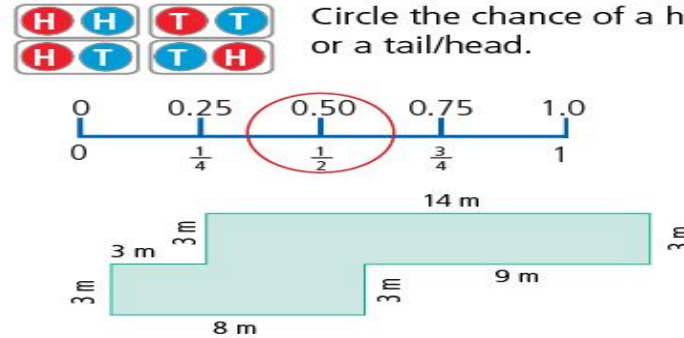
Topic 18: Area — Page 115

A.

1.(a) $20m^2$ (b) $27m^2$
  (c) $20m^2$ (d) $10m^2$
  (e) $19m^2$ (f) $6m^2$
  (g) $5m^2$
2. €539·73

3. Sitting room 22m
   Dining room 18m
   Kitchen 18m
   Playroom 20m
   Bathroom 10m
4. Presence of stairs
5. In the northern hemisphere, south-facing aspects receive most sun.

MONDAY

1. $0.8 \div 0.2 = \frac{0.8}{0.2} \times \frac{10}{10} = \frac{8}{2} = $ ___**4**___

2. 0.96, 0.97, 0.98, 0.99, ___**1**___

3. What is the perimeter of a
regular hexagon with 60-mm sides? ___**360**___ mm

4. $^-7 + {}^+3 = $ ___**−4**___

5. The total cost of four pizzas is €24.
What is the average cost of one pizza? € ___**6.00**___

6. $\frac{1}{2} < \frac{1}{10}$ ☐ True ✔ False

7. 8 L 253 mL $= 8\frac{253}{1,000}$ L $= 8.$___**253**___ L

8. $7 - 0.04 = $ ___**6.96**___

9. Which digit in the decimal 4.705 is the thousandth?
___**5**___

10. $20\% = \frac{2}{10} = 0.$___**2**___

11. Is the formula: area $= l + w$ correct? ___**no**___

12. $5^2 = $ ___**25**___

13. A cube has 2-cm by 2-cm faces.
What is the cube's surface area? ___**24**___ cm²

14. Write three capital letters that are symmetrical.
A,B,C,D,E,H,I,M,O,T,U,V,W,X,Y
_____, _____, _____

15. $6\% = 0.$___**06**___

16. Round 3.06 to 1 decimal place. ___**3.1**___

17.

Rotate the triangle 450° anticlockwise. Draw its new position.

18.

Circle the chance of a head/tail or a tail/head.

19. Area $= $ ___**66**___ m²

20. Perimeter $= $ ___**46**___ m

TUESDAY

1. $\frac{3}{4} > \frac{1}{2}$ ☑ True ☐ False

2. An octahedron has ___**8**___ faces.

___**12**___ edges.

___**6**___ vertices.
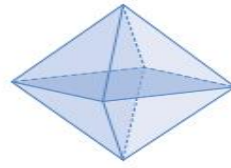
3. $0.9 \div 0.3 =$ ___**3**___

4. $^-4 + {}^+9 =$ ___**+5**___

5. 75,000 , 150,000 , 225,000 , ___**300,000**___

6. $5\,l\ 450\ mL = 5\frac{450}{1,000}\,l = 5.$___**45**___ l

7. An angle of 90° is a ___**right**___ angle.

8. What is the perimeter?

___**250**___ mm

30 mm 10 mm 70 mm 25 mm 15 mm 100 mm

9. $66\frac{2}{3}\% = \frac{2}{3} = 0.$___**66**___

10. This is a net of a ___**cube**___ .
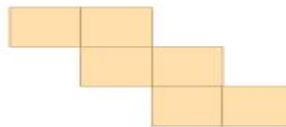
11. $6^2 =$ ___**36**___

12. Is the formula: area $= l - w$ correct? ___**no**___

13. Will a hexagon and a square tessellate together? ___**yes**___

14. A cube has 3-cm by 3-cm faces. What is the cube's surface area? ___**54**___ cm^2

15. Draw the axis of symmetry on the irregular pentagon.
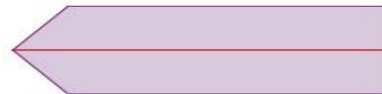
16. Round 6.14 to 1 decimal place. ___**6.1**___

17. Tick which would be the best to measure the height of your teacher.

☐ ruler ☐ trundle wheel ☑ metre stick

18. $9\% = 0.$___**09**___

19. The value of the 9 in 952,075 is ___**900,000**___ .

20. $4,000,000 - 400,000 =$ ___**3,600,000**___

WEDNESDAY

1. $5 \div \frac{1}{4} = 5 \times$ ___**4**___ $= 20$

2. Write the coordinates of Point A.
   ___**1,1**___
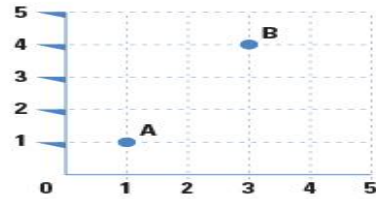
3. Write the coordinates of Point B.
   ___**3,4**___

4. 1.07, 1.08, 1.09, ___**1.1**___
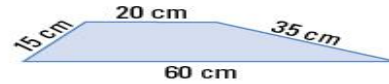
5. What is the perimeter? ___**130**___ cm

6. $8^2 =$ ___**64**___

7. $8 \div 0.1 =$ ☐ 8   ☐ 0.8   ✔ 80

8. $37\frac{1}{2}\% = \frac{3}{8} = 0.$___**375**___

9. Round 4.3781 to 1 decimal place. ___**4.4**___

10. A cube has 4-cm by 4-cm faces. What is the cube's surface area? ___**96**___ cm²

11. $110\% =$ (decimal) ___**1.1**___

12. This is a net of a
    ___**cube**___ .
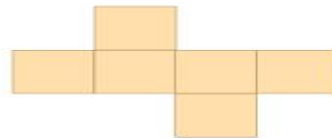
13. $\frac{2}{3} \times \frac{9}{12} =$ ___$\frac{3}{6}$ $(\frac{1}{2})$___

14. Which digit in the decimal 4.705 is the tenth? ___**7**___

The graph shows the number of sunny days for the first six months of a year.

15. Which month had 13 sunny days?
    ___**Feb**___

16. Which month had the most sunny days?
    ___**June**___

17. Which month had the least sunny days?
    ___**Jan**___

18. How many more sunny days had March than January?
    ___**10**___

19. Which month had fewer sunny days than you might expect?
    ___**Apr**___

20. Which month had 23 sunny days? ___**May**___

THURSDAY

1. $^-5 + {}^+3 =$ __**−2**__

2. The total cost of 5 drinks is €6.25.
   What is the average cost of one drink? € __**1.25**__

3. Rotate this rectangle 90° clockwise and draw the new position.

4. $1.2 \div 4 =$ __**0.3**__

5. 50, 5, 100, 10, 200, __**20**__ 400.

6. $7 \text{ l } 945 \text{ mL} = 7\frac{945}{1,000} \text{ l} = 7.$__**945**__$\text{ l}$

7. Which digit in the decimal 4.705 is the hundredth?
   __**0**__

8. $\frac{1}{3} + \frac{1}{6} =$ __**$\frac{3}{6}$** $(\frac{1}{2})$__

9. $5.5 - 0.9 =$ __**4.6**__

10. What is the perimeter?
    __**410**__ mm

    150 mm
    80 mm
    70 mm
    110 mm

11. $\frac{3}{5} < \frac{1}{2}$ ☐ True   ✔ False

12. Match the roads.

    Perpendicular = __**A**__   Parallel = __**B**__

    A   HAPPY STREET   HOLIDAY ROAD

    B   ---CHOCOLATE WAY---
    -----BEACH STREET----

13. $12 \div \frac{1}{3} = 12$ __**x**__ 3
    $+ - \times \div$

14. $80\% = \frac{8}{10} = 0.$__**8**__

15. Is the formula: area $= l \times w$ correct? __**yes**__

16. 1 whole = __**100**__ %

17. A cube has 5-cm by 5-cm faces. What is its surface area?
    __**150**__ cm²

18. Round 2.056 to 1 decimal place. __**2.1**__

19. This is a net of a __**cube**__.

20. $7 \times$ __**4**__ $= 28$

FRIDAY REVIEW

1. $0.6 \div 0.2 =$ _____3_____

2. $^-6 + {}^+9 =$ _____+3_____

3. The total cost of 5 pizzas is €25.50. What is the average cost of one pizza?

€ _____5.10_____

4. $\frac{1}{10} > \frac{1}{3}$

☐ True ☑ False

5. $4\,l\ 295\ ml = 4\frac{295}{1,000}\,l$

$= 4.$_____295_____ l

6. $\frac{2}{5} \times \frac{10}{15} =$ _____$\frac{4}{15}$_____

7. $0.1 =$ _____10_____ %

8. | 60,000 | , | 150,000 | ,
240,000 | , | 330,000 | ,
_____420,000_____

9. $\frac{1}{3} + \frac{1}{3} =$ _____$\frac{2}{3}$_____

10. What is the perimeter of a regular pentagon with 45-mm sides?

_____225_____ mm

11. This is a net of a

_____cube_____ .
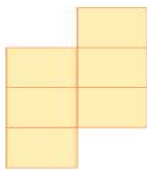
12. What is the perimeter of this quadrilateral?

60 mm

20 mm   15 mm

45 mm

_____140_____ mm

13. Area of a square $= l \times w$

☑ True ☐ False

14. A cube has 2-cm by 2-cm faces. What is the cube's surface area?

_____24_____ cm²

15. Complete the magic square.

4	9	2
3	5	7
8	1	6

16. An octahedron has

_____8_____ faces.

_____12_____ edges.

_____6_____ vertices.
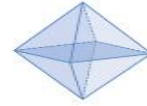
17. What do we call an angle that is between 180° and 360°?

_____reflex_____

18. $7 \div \frac{1}{3} = 7 \times \boxed{3} = 21$

19. Rotate this shape 450° anticlockwise and draw its new position.

20. $4^2 =$ _____16_____

21.

Write the coordinates of Point A.

_____4,4_____

22. Write the coordinates of Point B.

_____1,2_____

23. $30,000,000 - 300,000 =$

_____29,700,000_____

24. How many degrees has a circle?

_____360_____ °

25. $\frac{1}{8} + \frac{1}{4} =$ _____$\frac{3}{8}$_____

PROBLEM-SOLVING

Monday

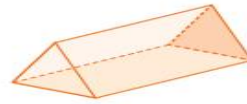**1.** What is the ratio of square-based pyramids to cubes?
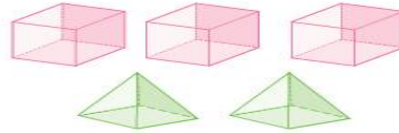
_____2:3_____

2. What is the ratio of cube faces to pyramid faces?

_____18:10_____

Tuesday

1. What is the ratio of triangular prism edges to cube edges?

_____9:12_____

2. If the ratio of edges of triangular prisms to cubes is 36:48, how many of each shape is there?

_____4_____

Wednesday

1. On a train trip to Dublin, one carriage had 45 passengers to 30 seats. In another carriage, there were 55 passengers to 30 seats. What is the total simplified ratio of passengers to seats?

_____5:3_____

2. On another trip, with the same 2 carriages, the simplified ratio of passengers to seats was 3:4. How many passengers were travelling?

_____45_____

Thursday

1. Niall spent 0.3 of his money in one shop and $\frac{5}{10}$ in another shop. He had €12 left. How much money did he start with?

€ _____60_____

2. Jenny's brothers are triplets. The four of them have an average age of 11. If Jenny is 14 years old, what age are her brothers?

_____10_____