

WEEK: 12

Week Beginning: (08/03/2021)

Subject: MATHS

Year: 8

Lesson Objective:

- Be able to find and use volumes of cuboids
- Revisiting Linear Equations and be able to solve to find x

Class Worksheets

- Pages 2 to 4 from the Learning Pack – See below

Homework

- Pages 5 and 6 from the Learning Pack – See below

Additional Notes

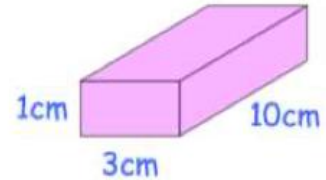
- All lesson worksheets and **homework for next week (due Week 13)** worksheets can be found below
- Week 11 homework will be marked in lesson hence make sure it is fully complete

Please print 2 a page or open this document during the lesson to save paper!

Mixed Questions on area and volume:

18. Find the volume and surface area of a cube of edge 5cm.

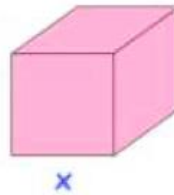
19. Find the volume and surface area of the cuboid.



20. A cube has a surface area of 54cm^2 .

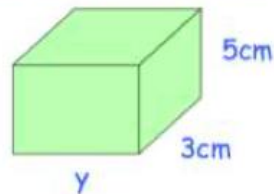
a) Find x

b) Find the volume of the cube.

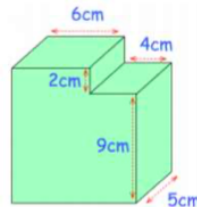


21. Find the missing length, y , in the cuboid.

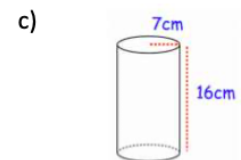
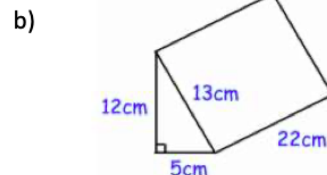
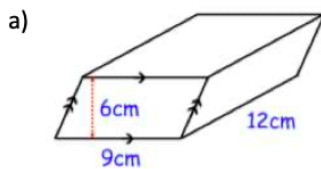
Surface area = 158cm^2



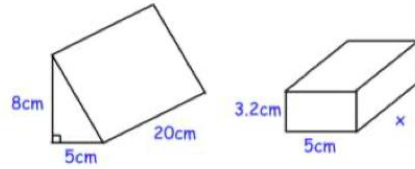
22. Find the volume and surface area of the prism.



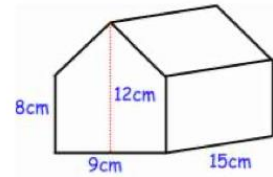
23. Calculate the volume of each solid shape.



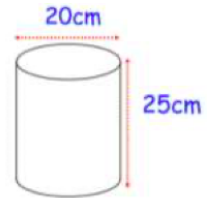
24. The cuboid and triangular prism have the same volume. Find x .



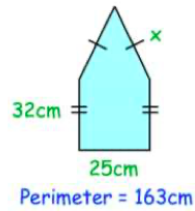
25. The diagram shows a solid house-shaped block of wood in a child's play set. The density of the wood is 0.71 g/cm^3 . Find the mass of the block.



26. The diagram shows the dimensions of a cylinder filled with liquid. How much liquid does it hold? Give your answer in litres.

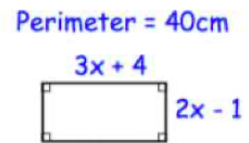


27. Find the missing length x , if the perimeter of the shape is 163 cm.



28. Find the area of a square of perimeter 28 cm.

29. The perimeter of the rectangle is 40 cm. Find x and hence find the area of the rectangle.



30. The ratio of the lengths in the right-angled triangle is 3 : 4 : 5.

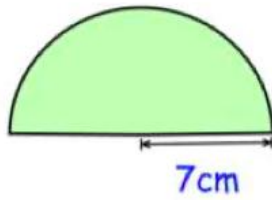
The perimeter is 60 cm.

- Find the lengths of each side of the triangle.
- Find the area of the triangle.

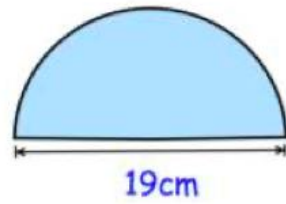


16. Find the area and perimeter of the semi-circles.

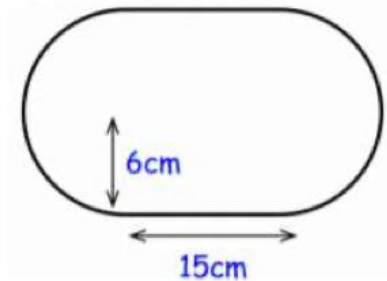
a)



b)



17. Find the area and perimeter of the stadium.



Section D

- 1) $2x = 6$
- 2) $5x = 10$
- 3) $4x = 12$

- 4) $10x = 90$
- 5) $3x = 15$
- 6) $6x = 24$

- 7) $7x = 35$
- 8) $12x = 36$
- 9) $15x = 30$

- 10) $20x = 40$
- 11) $40x = 120$
- 12) $50x = 200$

Section E

1) $\frac{x}{3} = 4$

4) $\frac{x}{8} = 4$

7) $\frac{x}{2} = 9$

10) $\frac{x}{12} = 6$

2) $\frac{x}{2} = 8$

5) $\frac{x}{7} = 3$

8) $\frac{x}{9} = 5$

11) $\frac{x}{14} = 2$

3) $\frac{x}{5} = 7$

6) $\frac{x}{5} = 4$

9) $\frac{x}{7} = 8$

12) $\frac{x}{30} = 5$

Section F

1) $4x = 48$

7) $x - 19 = 30$

13) $7x = 56$

17) $5x = 100$

2) $x + 13 = 22$

8) $10x = 160$

14) $18 + x = 24$

18) $\frac{x}{3} = 300$

3) $9x = 63$

9) $13 + x = 27$

15) $\frac{x}{4} = 12$

19) $x + 49 = 110$

4) $11x = 132$

10) $6x = 42$

16) $25 + x = 39$

20) $100x = 6500$

5) $12 + x = 26$

11) $x + 17 = 42$

6) $\frac{x}{8} = 12$

12) $\frac{x}{11} = 11$

Homework:

Section A

- | | | | |
|------------------|-------------------|-------------------|--------------------|
| 1) $7x + 9 = 23$ | 4) $9x + 5 = 41$ | 7) $10x + 2 = 72$ | 10) $4x + 7 = 9$ |
| 2) $5x + 7 = 42$ | 5) $4x + 2 = 34$ | 8) $7x + 3 = 52$ | 11) $8x + 11 = 15$ |
| 3) $4x + 3 = 51$ | 6) $11x + 3 = 36$ | 9) $6x + 5 = 17$ | 12) $4x + 17 = 18$ |

Section B

- | | | | |
|------------------|-------------------|------------------|--------------------|
| 1) $1 + 6x = 19$ | 4) $11 + 5x = 71$ | 7) $23 = x + 8$ | 10) $13 = 11 + 4x$ |
| 2) $9 + 7x = 30$ | 5) $5 + 3x = 32$ | 8) $28 = 3x + 1$ | 11) $7 = 8x + 3$ |
| 3) $3 + 2x = 17$ | 6) $4 + 5x = 44$ | 9) $53 = 8x + 5$ | 12) $12 = 7 + 15x$ |

Section C

- | | | | |
|------------------|------------------|-------------------|-------------------|
| 1) $4x - 1 = 31$ | 4) $8x - 2 = 46$ | 7) $9x - 4 = 32$ | 10) $2x - 1 = 2$ |
| 2) $3x - 4 = 29$ | 5) $2x - 7 = 21$ | 8) $5x - 1 = 64$ | 11) $4x - 8 = 10$ |
| 3) $6x - 5 = 31$ | 6) $7x - 3 = 18$ | 9) $12x - 9 = 39$ | 12) $15x - 2 = 3$ |

Section D

- | | | | |
|-----------------|------------------|--------------------|--------------------|
| 1) $x - 3 = -2$ | 4) $x + 3 = 2$ | 7) $2x - 3 = -9$ | 10) $2x + 5 = 1$ |
| 2) $x - 5 = -1$ | 5) $x + 9 = 4$ | 8) $2x - 10 = -2$ | 11) $2x + 14 = 4$ |
| 3) $x - 6 = -4$ | 6) $x + 10 = -5$ | 9) $2x - 18 = -20$ | 12) $2x + 11 = -5$ |

Section E

- | | | | |
|----------------|-----------------|------------------|--------------------|
| 1) $5 - x = 2$ | 4) $8 - x = 14$ | 7) $3 - 2x = 5$ | 10) $2 - 3x = 14$ |
| 2) $9 - x = 5$ | 5) $2 - x = 15$ | 8) $5 - 2x = 15$ | 11) $6 - 3x = 27$ |
| 3) $6 - x = 3$ | 6) $7 - x = 21$ | 9) $8 - 2x = 12$ | 12) $16 - 5x = 61$ |

Section F

- | | | | |
|------------------|-------------------|--------------------|---------------------|
| 1) $3x - 1 = 14$ | 5) $1 - x = 6$ | 9) $34 = -6 + 5x$ | 13) $3 - 2x = 5$ |
| 2) $x - 4 = -3$ | 6) $8 + 5x = 63$ | 10) $6 + 11x = -5$ | 14) $8x + 42 = -54$ |
| 3) $3 + 2x = 17$ | 7) $16 - 2x = 40$ | 11) $-29 = 3 + 4x$ | 15) $6x - 16 = -70$ |
| 4) $7x - 6 = 50$ | 8) $34 = 6 - 4x$ | 12) $6x + 13 = 25$ | 16) $-9 - 4x = -53$ |

1 a. $5 = \frac{c+1}{1}$

1 b. $2 = \frac{5-s}{9}$

2 a. $7w-2 = 3$

2 b. $2 = 7-8s$

3 a. $7 = 3p-8$

3 b. $\frac{v+1}{6} = 7$