

# Cumulative Test A

## Units 1-11

1. List all the factors of 36.

1, 2, 3, 4, 6, 9, 12, 18, 36

2. Lucy earns \$1750 a month. She gives her mother \$280 and keeps the rest for herself each month. How much money does she keep for herself in half a year? → 6 months

$$\begin{array}{r} 615 \\ \$1750 \\ - \$280 \\ \hline \end{array}$$

$$\begin{array}{r} \$1470 \\ \times \quad 6 \\ \hline \end{array}$$

$$\frac{3}{7} \$1470$$

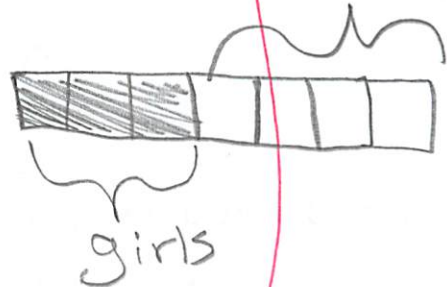
$$\underline{\$8820}$$

3.  $\frac{3}{7}$  of the students in a class are girls. There are 12 boys in the class. How many students are there in the class?

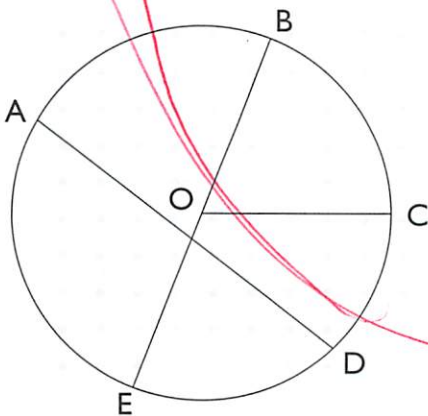
$$12 \div 4 = 3$$

$$3 \times 7 = \underline{21}$$

12 boys



4. In the circle below, O is the center.



Name a radius of the circle. OC

5. Mr. Kim's garden has an area of 1 square yard. What is its area in square feet?

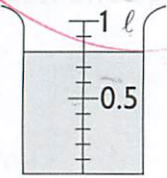
?

$$3 \times 3 = 9$$

6. What is the value of the digit 3 in 187.34? 0.3

~~7.~~

7. What is the volume of water in the beaker?



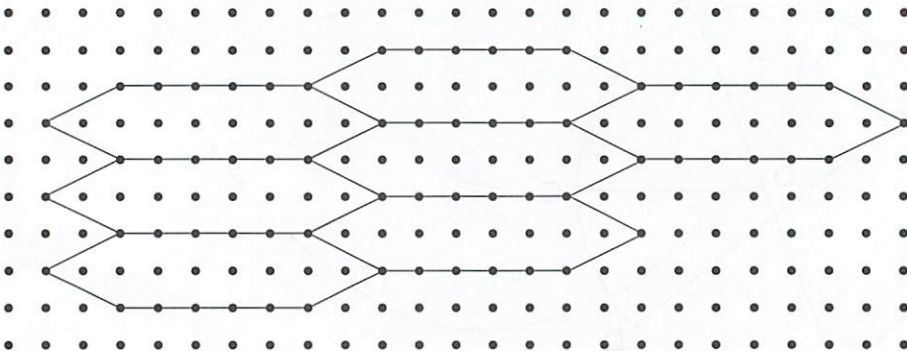
$$\text{cm}^3 = \text{ml}$$

800 cm<sup>3</sup>

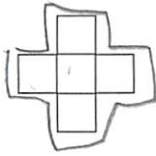
8. Multiply  $306.5 \times 9$ .

$$\begin{array}{r} \textcircled{5} \textcircled{+4} \\ 306.5 \\ \times \quad 9 \\ \hline 2758.5 \end{array}$$

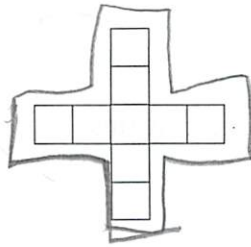
9. Draw 3 more unit shapes in the tessellation.



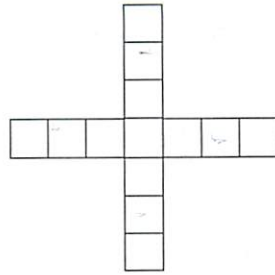
10.



Pattern 1



Pattern 2



Pattern 3

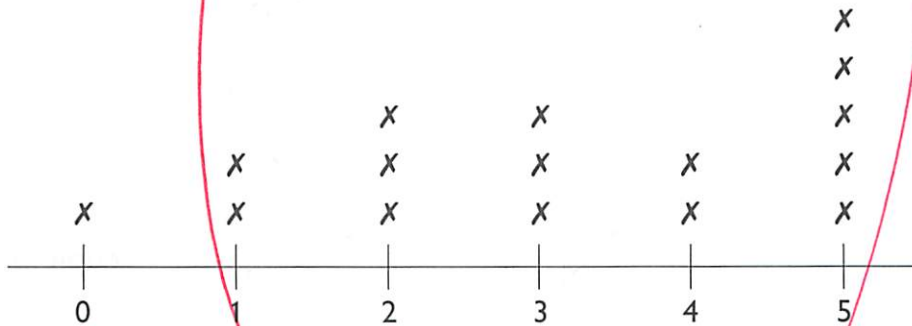
Complete the table.

Pattern	1	2	3	4
Number of squares ( $n$ )	5	9	13	17
Number of sides ( $s$ )	12	20	28	36

Write an equation to express the relationship between the number of squares,  $n$ , and the number of sides,  $s$ .

$2n + 2 = s$

11. Winona surveyed her friends to find out how many storybooks they read last month. The results are shown in the line plot.



(a) How many friends did she survey? 16

(b) What is the median number of books read last month?

3

0, 1, 1, 2, 2, 2, 3, 3, 3, 4, 4, 5, 5, 5, 5

$$\begin{array}{r} 316 \\ \times 5 \\ \hline 8002 \end{array}$$

12. (a) 5 lb 3 oz = 83 oz

(b) 3 days 8 hours = 80 hours

(c) 15 yd 3 ft = 48 ft

13. There are 6 bags of sugar, each weighing 1 kg 250 g. What is their total weight?

$$\begin{array}{l} 1 \text{ kg } 250 \text{ g} \\ = 1250 \text{ g} \end{array}$$

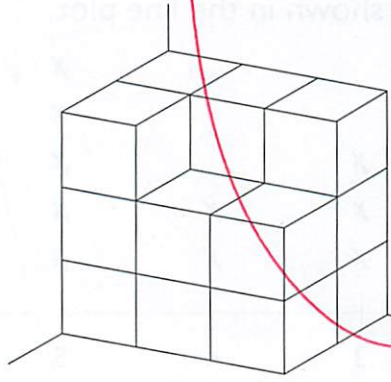
$$\begin{array}{r} 1250 \text{ g} \\ \times 6 \\ \hline 7500 \text{ g} = 7 \text{ kg } 500 \text{ g} \end{array}$$

14. Linda had 8 m 40 cm of wire. She cut it equally into 6 pieces. How long was one piece?

$$\begin{array}{l} 8 \text{ m } 40 \text{ cm} \\ = 840 \text{ cm} \end{array}$$

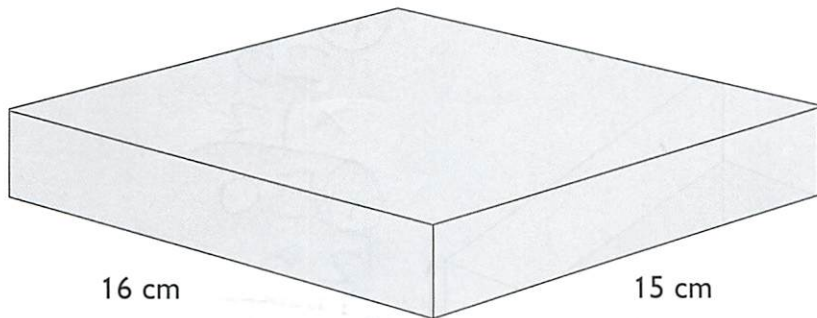
$$\begin{array}{r} 840 \\ \div 6 \\ \hline 140 \end{array}$$

15. What is the volume of the solid?



16 cubic units

16. Find the volume of the rectangular prism.

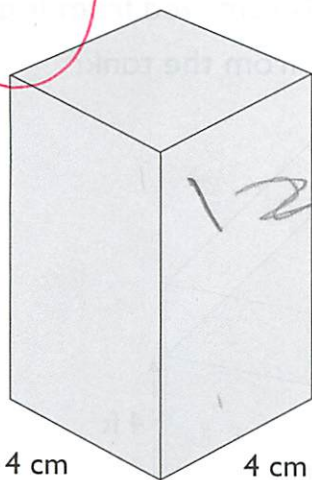


$$\begin{array}{r} \textcircled{+} 16 \\ \times 3 \\ \hline 48 \end{array}$$

720 cm

$$\begin{array}{r} \textcircled{+} 48 \\ \times 15 \\ \hline \textcircled{+} 720 \\ + 48 \\ \hline \textcircled{768} \end{array}$$

17. Find the difference between the volumes of these rectangular prisms.



128

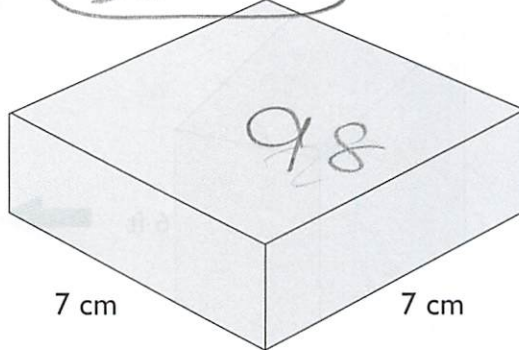
8 cm

4 cm

4 cm

$$\begin{array}{r} 012 \\ \times 88 \\ \hline 98 \end{array}$$

30 cm



98

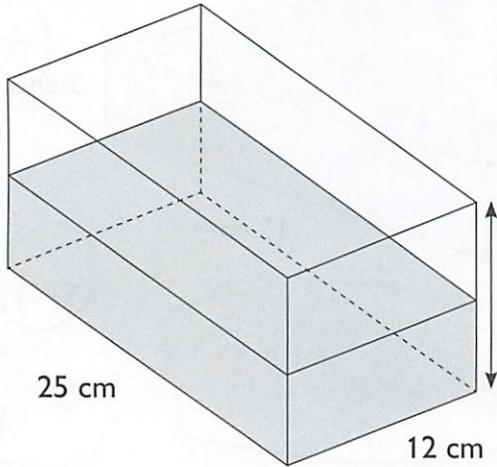
7 cm

7 cm

2 cm

$$\begin{array}{r} 128 \\ - 98 \\ \hline 30 \end{array}$$

18. The tank below is half filled. What is the volume of water in the tank?

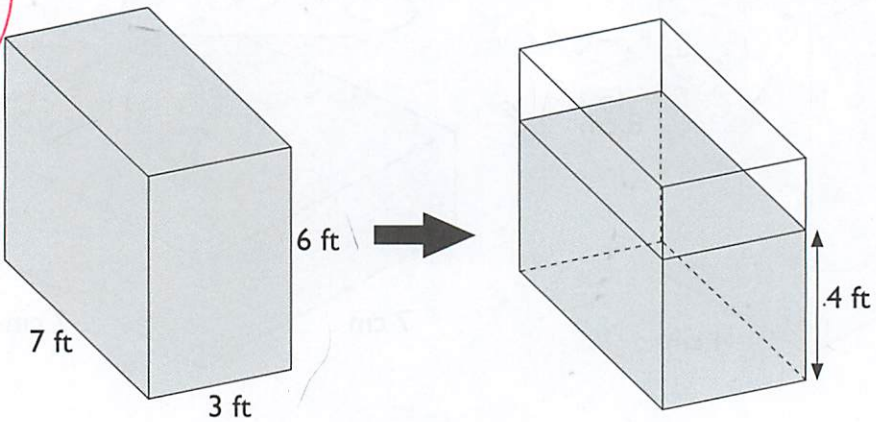


$$\begin{array}{r} (+) 25 \\ \times 12 \\ \hline (+) 50 \\ 25 \\ \hline 300 \end{array}$$

$$300 \times 10 = 3000$$

$$\begin{array}{r} 1500 \text{ cm} \\ 2 \overline{) 3000} \\ \underline{2} \phantom{00} \\ 10 \phantom{0} \\ \underline{10} \\ 0 \end{array}$$

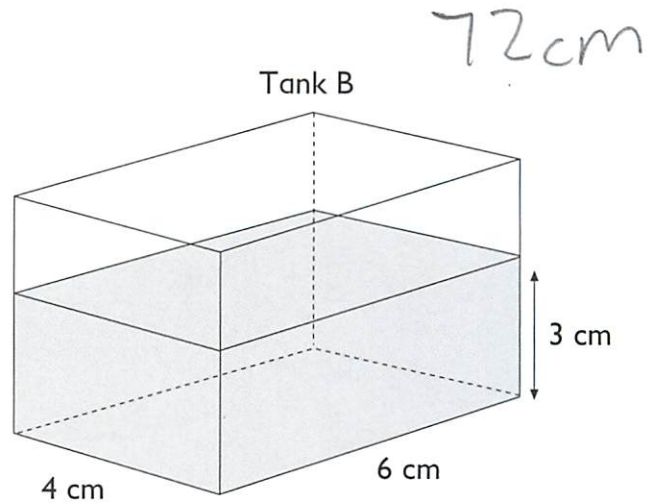
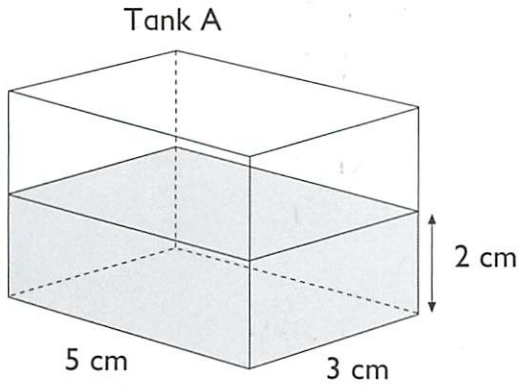
19. A tank is filled to the brim. Then some water is removed from it as shown. What is the volume of water removed from the tank?



$$7 \times 3 = 21$$

$$21 \times 2 = 42 \text{ ft}$$

20. (a) Two tanks A and B contain water. The water in Tank A is poured into Tank B. What is the volume of water in Tank B now?



$$5 \times 3 = 15$$

$$15 \times 2 = 30$$

$$\begin{array}{r} 72 \\ + 30 \\ \hline 102 \text{ cm} \end{array}$$

- ~~(b)~~ The water in Tank B is now poured equally into 3 similar jugs, filling each jug to the brim. What is the capacity of each jug?

$$\begin{array}{r} 24 \\ 3 \overline{) 72} \\ \underline{- 6} \phantom{0} \\ 12 \\ \underline{- 12} \\ 0 \end{array}$$