

St Olaves / Newstead

Homework 11 Answer Key

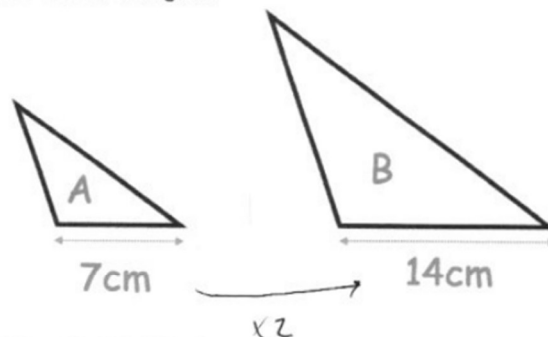
Comprehension

Answer key:

1. B
2. C
3. B
4. A
5. C
6. D
7. C
8. E
9. D
10. B
11. A, C
12. A, D

AREA AND PERIMETER

Below are two similar triangles.



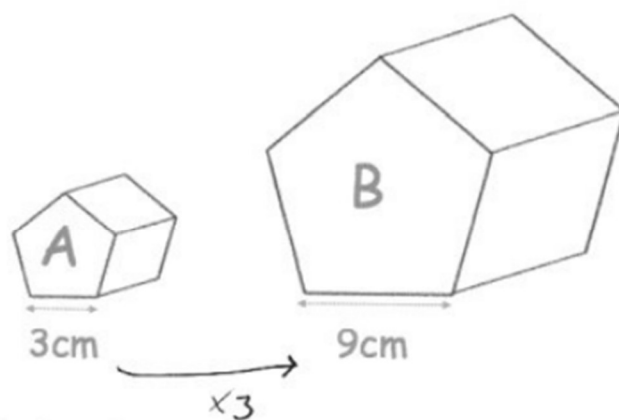
The area of triangle A is 20cm^2
Work out the area of triangle B.

$$\text{Area} \times 4 \quad (2^2)$$

$$20 \times 4$$

$$\dots\dots\dots 80 \text{cm}^2$$

Below are two similar pentagonal prisms.



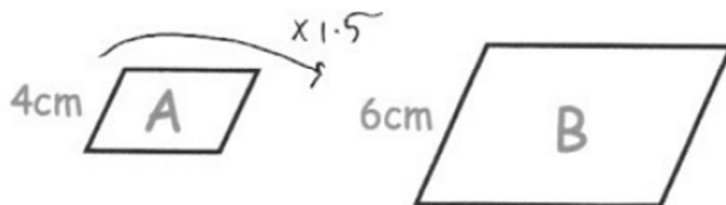
The volume of prism A is 15cm^3
Work out the volume of prism B.

$$\text{Volume} \times 3^3 \quad (\times 27)$$

$$15 \times 27 =$$

$$\underline{405} \text{ cm}^3$$

Below are two similar parallelograms.



The area of parallelogram A is 28cm^2

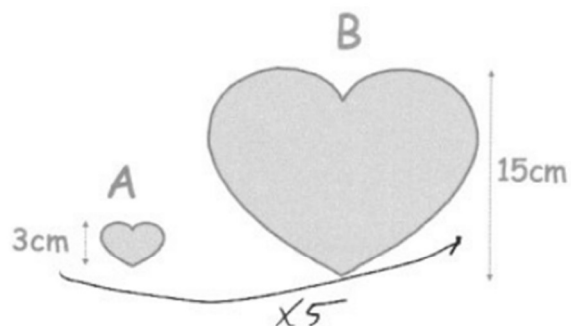
Work out the area of parallelogram B.

$$\text{Area} \times 1.5^2 \quad (\times 2.25)$$

$$28 \times 1.5^2$$

$$\underline{63} \text{ cm}^2$$

Shown below are two mathematically similar shapes.



The area of shape B is 150cm^2

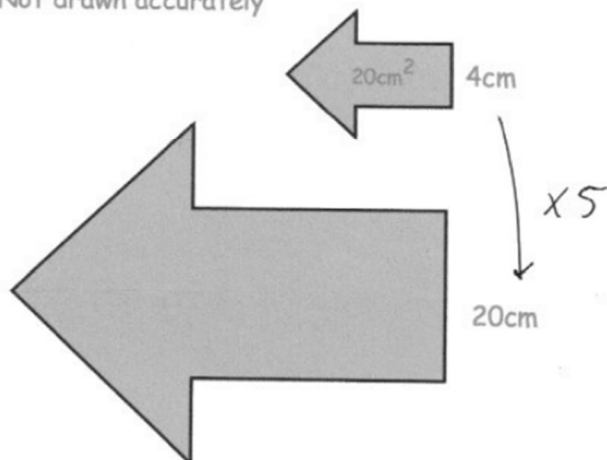
Work out the area of shape A. $\text{Area A} \rightarrow \text{Area B} \times 5^2 \text{ (x25)}$

$$150 \div 5^2$$

..... 6 cm^2

Shown are two logos that are mathematically similar.

Not drawn accurately



The area of the smaller logo is 20cm^2

$$\text{Area} \times 5^2 \text{ (x25)}$$

Find the area of the larger logo.

$$20 \times 5^2$$

..... 500 cm^2

$\text{Perimeter} = 14.3 + 14.3 + 5.6 + 5.6$
$= 39.8 \text{ cm}$
$\text{Perimeter} = 2\pi r = 2 \times \pi \times 2.2$
$= \frac{22}{5}\pi = 13.823 \dots \text{ cm}$
$\text{Perimeter} = 11.5 + 5.6 + 5.6$
$= 22.7 \text{ cm}$
$\text{Perimeter} = 135 + 200 + 200 + 45 + (135 - 45)$
$= 670 \text{ cm}$
$\text{Perimeter} = 12 + 13.4 + 6 + (\frac{1}{4} \times 2\pi \times 6)$
$= 31.4 + 3\pi = 40.82 \dots \text{ cm}$

Verbal Reasoning

23. B

24. D

25. B

26. C

27. B

28. E

29. A

30. B

31. E

32. B

33. B

NVR

A
C
C
D
B
B
C
D
A
C