SURDS

Answer all of these questions. Remember to show your working out in all questions.

MAIN QUESTIONS

1. $\sqrt{12}$

2. $\sqrt{18}$

3. $\sqrt{50}$

4. $\sqrt{72}$

5. $\sqrt{27}$

6. $\sqrt{8}$

7. $\sqrt{32}$

8. $\sqrt{45}$

9. $\sqrt{75}$

10. $\sqrt{98}$

11. $\sqrt{200}$

12. $\sqrt{128}$

13. $\sqrt{12} \times \sqrt{3}$

14. $\sqrt{8} \times \sqrt{2}$

15. $\sqrt{18} \times \sqrt{2}$

16. $\sqrt{27} \times \sqrt{3}$

17. $\sqrt{20} \times \sqrt{5}$

18. $\sqrt{50} \div \sqrt{2}$

19. $\sqrt{72} \div \sqrt{2}$

20. $\sqrt{75} \div \sqrt{3}$

21. $\sqrt{98} \div \sqrt{2}$

22. $\sqrt{200} \div \sqrt{2}$

23.

$\sqrt{12} \times \sqrt{27}$

24.

$\sqrt{8} \times \sqrt{18}$

25.

$\sqrt{20} \times \sqrt{45}$

26.

$\sqrt{32} \times \sqrt{50}$

27.

$\sqrt{75} \times \sqrt{12}$

28.

$\sqrt{98} \times \sqrt{2}$

29.

$\sqrt{128} \div \sqrt{8}$

30.

$\sqrt{200} \div \sqrt{8}$

MASTER QUESTIONS

M1.

A square has an area of 50cm^2. What is the length of one side in surd form?

M2.

A rectangle has length $\sqrt{18}$ cm and width $\sqrt{8}$ cm. Calculate its area.

M3.

A right-angled triangle has sides of length $\sqrt{12}$ cm and $\sqrt{27}$ cm. Find the length of the hypotenuse.

M4.

A square garden has an area of 72m^2. Express the perimeter in surd form.

M5.

A cube has a volume of 128cm^3. Find the length of one edge in surd form.

M6.

A rectangle's area is 48cm^2 and its length is $\sqrt{12}$ cm. Find its width.

M7.

A circle has an area of $50\pi\ \text{cm}^2$. Express its radius in surd form.

M8.

A triangle has sides $\sqrt{8}$ cm, $\sqrt{18}$ cm and $\sqrt{50}$ cm. Show that it is right-angled.

M9.

A rectangular field has length $\sqrt{75}$ m and width $\sqrt{12}$ m. Calculate the diagonal length.

M10.

A square has a diagonal of length $\sqrt{98}$ cm. Find the area of the square.