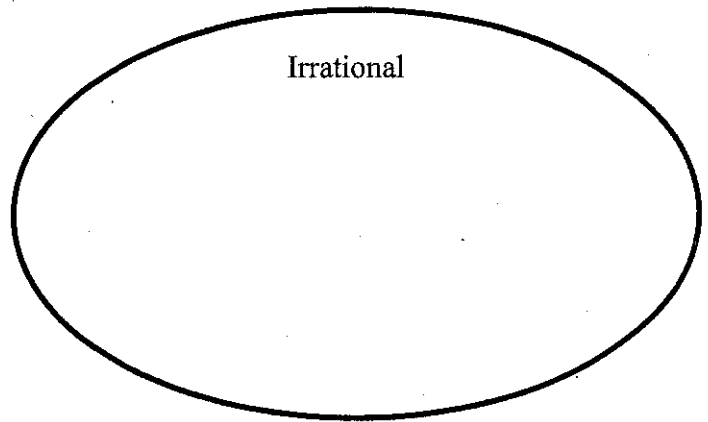
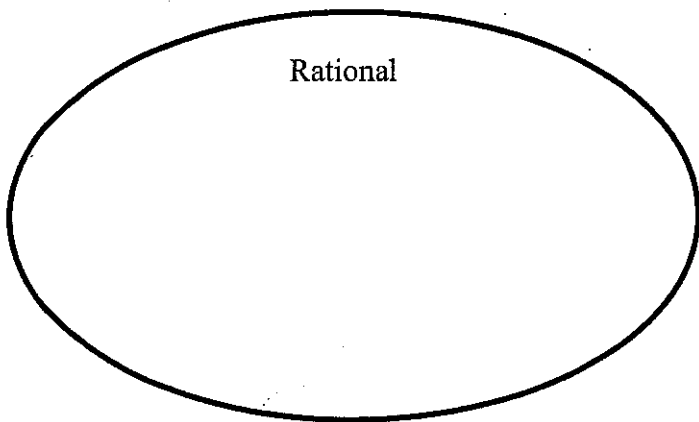


ADV MATH 7 S.G. NAME _____

1. Sort the numbers into 2 groups, rational or irrational. Write the numbers in the appropriate bubble.

$\sqrt{3}$ $\sqrt{64}$ $-\sqrt{16}$ 3.6 $\frac{5}{2}$ $-\frac{3}{4}$ $3.010203\dots$
 $3.\overline{6}$ -4.5 $\sqrt{80}$ $\sqrt[3]{27}$ $-2.\overline{75}$ $6.3132\dots$



LIST THE TWO PERFECT SQUARES EACH FALLS BETWEEN & ROUND TO NEAREST.

2. $\sqrt{30}$

3. $\sqrt{70}$

4. $\sqrt{22}$

FIND EACH VALUE WHEN $x = 3$.

5. $\sqrt[3]{9x}$

6. $(4x)^2$

7. $3x^2 - 3$

8. $\sqrt{3x}$

FIND EACH CUBE ROOT.

9. $\sqrt[3]{125}$

10. $\sqrt[3]{216}$

11. $\sqrt[3]{27}$

SIMPLIFY. (LEAVE IN EXPONENT FORM)

12. $7^2 \cdot 7^5$

13. $(-6)^3 \cdot (-6)^2$

14. $\frac{x^6 y^3}{xy}$

SIMPLIFY.

15. $5^0 =$ _____

16. $3^{-3} =$ _____

17. $(-4)^{-2}$

18. $x^0 =$ _____

19. $7^{-2} =$ _____

20. $(xy)^0 =$ _____

21. WHAT IS THE LENGTH OF ONE SIDE OF A SQUARE THAT HAS AN AREA OF 100cm^2 ?

22. WHAT IS THE LENGTH OF ONE EDGE OF A CUBE THAT HAS A VOLUME OF 216cm^3 ?

WRITE IN SCIENTIFIC NOTATION.

23. 3,800,000 _____

24. 42,000,000 _____

25. .000082 _____

26. .00034 _____

SOLVE & WRITE IN SCIENTIFIC NOTATION

27. $(2.2 \times 10^3)(4.5 \times 10^5)$ _____

28. $3.6 \times 10^{-3} + 4.2 \times 10^{-3}$ _____

29. $\frac{4.8 \times 10^6}{1.6 \times 10^2}$ _____

30. $6.4 \times 10^3 - 4.2 \times 10^3$ _____