Quiz #1: Circles

A. True or False

Write *True* if the expression is true or *False* if it is false.

1. $\frac{14}{21} = \frac{2}{3}$
2. $\dfrac{3x^2}{6x^2} \neq \dfrac{1}{2}$
3. $\sqrt{3} \geq 2$
4. $\sqrt[4]{5} \leq \pi$

B. Multiple Choice

Encircle the letter of the correct answer.

1. Which is not a formula for slope m?

   a. $\dfrac{rise}{run}$ b. $\dfrac{y_2 - y_1}{x_2 - x_1}$ c. $\dfrac{\text{vertical change}}{\text{horizontal change}}$ d. $a^2 + b^2 = c^2$

2. Which is **not** a polynomial?

   a. $\sqrt[3]{5x^2 - 3^{y-1}}$

   b. $\begin{cases} 3x - 7y < 4 \\ x + \ \ y > 5 \end{cases}$

   c. $\dfrac{\Delta x}{\Delta y}$

   d. $\sin x \cdot \cos x = \tan x$

3. Which is a rational expression?

   a. $\log_{x+n} y^{z+n}$

   b. $\dfrac{\dfrac{y-1}{x+1}}{1 - \dfrac{x-1}{y+1}}$

   c. $\sum_1^n x^3$

   d. $\left(\dfrac{x^2 - y^2}{x^2 + y^2}\right) \div \left[\dfrac{x^3 - y^3}{x^3 + y^3}\right]$

C. Matching Type

Match the set to its corresponding symbol.

Set	Symbol
1. Real numbers	a. $\mathbb{R}$
2. Integers	b. $\mathbb{Z}$
3. Natural numbers	c. $\mathbb{N}$
4. Rational numbers	d. $\mathbb{Q}$
5. Complex numbers	e. $\mathbb{C}$
6. Positive integers	f. $\mathbb{Z}_+$
7. Negative integers	g. $\mathbb{Z}_-$
8. Null set	h. $\emptyset$ or {} or $\varnothing$
9. Subset	i. $\subset$
10. Union	j. $\cup$
11. Intersection	k. $\cap$
12. Element	l. $\in$
13. Cartesian product	m. $A \times B$
14. Infinity	n. ∞

D. Fill in the Blanks

Write in the blank the word or phrase that will make the statement true.

15. $\overline{AB} \parallel$ _____

16. $m\angle\alpha \pm m\angle\beta \approx$ _____°

17. $\overleftrightarrow{MN} \perp$ _____

18. $\triangle ABC \sim \square JKLM \sim$ _____

19. $\overset{\frown}{CD} \cong$ _____

20. $\overleftrightarrow{XY} \cong$ _____