

Algebra Quiz

Mark each expression true or false!

Name: _____

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|------|--|----|------|-------|
| 1 . | $\frac{3}{a} + \frac{3}{b} = \frac{3}{a+b}$ | 1 | TRUE | FALSE |
| 2 . | $\frac{a+b}{c+d} = \frac{a}{c} + \frac{b}{d}$ | 2 | TRUE | FALSE |
| 3 . | $\sqrt{a^2 - b^2} = a - b$ | 3 | TRUE | FALSE |
| 4 . | $(a - b)^2 = a^2 - b^2$ | 4 | TRUE | FALSE |
| 5 . | $\frac{a}{b} = \frac{a^2}{b^2}$ | 5 | TRUE | FALSE |
| 6 . | $\sqrt{a+b} = \sqrt{a} + \sqrt{b}$ | 6 | TRUE | FALSE |
| 7 . | $\frac{a+b}{b} = a$ | 7 | TRUE | FALSE |
| 8 . | $\frac{\sin x}{\sin y} = \frac{x}{y}$ | 8 | TRUE | FALSE |
| 9 . | $2a^{-1} = \frac{-1}{2a}$ | 9 | TRUE | FALSE |
| 10 . | $a^{-2} = -a^2$ | 10 | TRUE | FALSE |
| 11 . | $\frac{\ln(\ln x)}{\ln x} = \frac{\ln x}{x}$ | 11 | TRUE | FALSE |
| 12 . | $\frac{1}{\frac{1}{a} + \frac{1}{b}} = a + b$ | 12 | TRUE | FALSE |
| 13 . | $\frac{2}{a^3} = \frac{a^2}{a^3}$ | 13 | TRUE | FALSE |
| 14 . | $(-a)^2 = -a^2$ | 14 | TRUE | FALSE |
| 15 . | $\frac{\sin 2a}{a} = \sin 2$ | 15 | TRUE | FALSE |
| 16 . | $\sin 2a = 2 \sin a$ | 16 | TRUE | FALSE |
| 17 . | $\sin(a + b) = \sin a + \sin b$ | 17 | TRUE | FALSE |
| 18 . | $\log(a + b) = \log a + \log b$ | 18 | TRUE | FALSE |
| 19 . | $(\sin a)(\sin 2a) = 2(\sin a)^2$ | 19 | TRUE | FALSE |
| 20 . | If $(a + b) = 0$, either $a = 0$ or $b = 0$ | 20 | TRUE | FALSE |
| 21 . | If $x(x - 2) = 24$, either $x = 24$ or $x - 2 = 24$ | 21 | TRUE | FALSE |
| 22 . | $abc = (ab)(ac)$ | 22 | TRUE | FALSE |
| 23 . | If $\log a = b$, then $a = \frac{b}{\log}$ | 23 | TRUE | FALSE |
| 24 . | $\frac{10t + u}{10u + v} = \frac{t}{v}$ | 24 | TRUE | FALSE |
| 25 . | $\log(a + b) = (\log a)(\log b)$ | 25 | TRUE | FALSE |