

THE UNIVERSITY INTERSCHOLASTIC LEAGUE

TIE BREAKER

#198

1. $\left[\frac{3.25 \times 0.188}{0.566 \times 8.72} \right]^2 \times \sqrt{\frac{\sqrt{3.74 \times \pi \times 12}}{0.000517 \times 0.0492}}$ ----- equals _____

2. $\frac{(0.297 \times 3670 \times 0.00473)^2 \times \pi^3}{\sqrt{1.46 \times 0.00278} \times \sqrt[3]{\pi \times 0.0461}}$ ----- equals _____

3. $\left[\frac{1.68}{3.72} \right]^3 \times \sqrt[3]{\frac{62}{1.73}} \times \frac{\sqrt{1.66 \times 2.43}}{0.0715 \times 0.461}$ ----- equals _____

4. $\frac{\sqrt{\sqrt{1.92 \times 37,600} \times 0.496 \times 0.327}}{(0.545 \times \sqrt[3]{\pi} \times 6.11)^2 \times 4,820,000}$ ----- equals _____

5. $\sqrt{\frac{\sqrt{\frac{2.87 \times 4.24}{0.0427 \times 0.366}}}{0.00376 \times 0.00828} \times \frac{\pi^3 \times \left[\frac{2.76}{4.32} \right]^2}{0.979 \times 0.162}}$ ----- equals _____

6. $\left[\frac{(0.374)^2}{\left[\frac{0.627}{0.493} \right]^3} \right]^2 \times \frac{\sqrt{0.672 \times 62,400,000}}{\frac{3.72 \times 4.68 \times 9.28}{6.44 \times 7.07 \times 5.25}}$ ----- equals _____

7. $\frac{(2.64 \times \pi)^3 \times 0.546 \times 0.00000276}{\sqrt{\frac{0.392 \times 2.68 \times 4.24 \times 0.00827}{0.0332 \times 0.476 \times 2.85 \times 0.0707}}}$ ----- equals _____

8. $\left[\frac{\sqrt{\frac{3.25 \times 1.76}{0.497 \times 3270}}}{\frac{0.0462 \times 0.0823}{(0.496 \times 3.42)^2}} \right]^2 \times \left[\frac{\sqrt{4.72}}{0.837 \times 0.619} \right]^3 \times \frac{4}{129 \times \frac{0.0732 \times 1.46}{0.0732 \times 1.46}}$ ----- equals _____

9. $\sqrt{\frac{\sqrt{\frac{326}{0.414}}}{0.000226} \times \left[\frac{\left[\frac{29}{73} \right]^2}{10,600} \right]^2 \times \frac{2.75 \times 1.45}{8.32 \times 7.06}}$ ----- equals _____

$$10. \frac{\sqrt{\sqrt{\frac{0.496 \times 0.772}{0.0386 \times 0.00796}} \times \frac{3.77 \times 8.66}{4.92 \times 3.87}}}{\left[\frac{\pi}{6}\right]^2 \times \frac{0.283 \times 417}{6.25 \times 3.41} \times \frac{74 \times 86}{39 \times 44}} \text{ ----- equals } \underline{\hspace{2cm}}$$

$$11. \frac{\left[\frac{3.79 \times 0.0466}{\left[\frac{487}{396}\right]^3 \times \frac{0.819}{0.382}}\right]^2 \times \frac{\sqrt{0.707 \times 0.866}}{\frac{24}{83} \times \sqrt[3]{\frac{4.72}{0.0619}}}}{\hspace{10em}} \text{ ----- equals } \underline{\hspace{2cm}}$$

$$12. \frac{\sqrt{\frac{6.25 \times 1.44}{0.875 \times 0.333}} \times \frac{4.29 \times 1.67}{3.57 \times 7.47}}{(2.49 \times 0.0000782 \times 936 \times 47.2)^2} \text{ ----- equals } \underline{\hspace{2cm}}$$

$$13. \frac{\sqrt{\frac{102 \times \sqrt{\pi}}{0.866 \times 5280}} \times \left[\frac{\sqrt[3]{\pi}}{279}\right]^2 \times \left[\frac{62,500}{81 \times 46}\right]^3}{72.6 \times 0.839 \times 4260 \times 7.73 \times 12} \text{ ----- equals } \underline{\hspace{2cm}}$$

$$14. \frac{\left[\frac{\left[\frac{826}{733}\right]^2}{\left[\frac{449}{387}\right]^3}\right]^2 \times \frac{\sqrt{\frac{0.329 \times 1.45 \times 26.2}{0.0000000392 \times 0.746}}}{\frac{72.4 \times 34.6 \times 863,000}{0.00492 \times 1.25 \times 0.169}}}{\hspace{10em}} \text{ ----- equals } \underline{\hspace{2cm}}$$

$$15. \frac{\sqrt{\frac{18.6 \times 0.00432}{\sqrt{\frac{0.217 \times 4.66}{0.0893 \times 0.754}}}} \times \frac{4.72 \times 0.000772}{\left[\frac{367}{452}\right]^2 \times \sqrt[3]{\sqrt[3]{1.72}}}}{\hspace{10em}} \text{ ----- equals } \underline{\hspace{2cm}}$$

$$16. \frac{\sqrt{\frac{0.866 \times 3.28 \times 2.54 \times 0.777}{4.79 \times 0.00839 \times 0.617 \times 0.0458}}}{\left[(1.79 \times 0.0483)^2 \times \pi \times 2.43 \times 54\right]^2} \text{ ----- equals } \underline{\hspace{2cm}}$$

$$17. \frac{\sqrt{\frac{0.486}{\sqrt[3]{\frac{2.86}{0.486}}}} \times \frac{0.00474}{\sqrt[3]{\frac{372}{0.486}}} \times \left[\frac{0.0000445}{\left[\frac{0.00772}{22 \times 69}\right]^2}\right]^2}{\hspace{10em}} \text{ ----- equals } \underline{\hspace{2cm}}$$

1.	1.95×10^1	$(1.93 \times 10^1$	to	$1.97 \times 10^1)$
2.	2.46×10^4	$(2.44 \times 10^4$	to	$2.48 \times 10^4)$
3.	1.85×10^{-8}	$(1.83 \times 10^{-8}$	to	$1.87 \times 10^{-8})$
4.	5.76×10^{-2}	$(5.74 \times 10^{-2}$	to	$5.78 \times 10^{-2})$
5.	5.90×10^2	$(5.88 \times 10^2$	to	$5.92 \times 10^2)$
6.	4.43×10^{-4}	$(4.41 \times 10^{-4}$	to	$4.45 \times 10^{-4})$
7.	2.53×10^{-4}	$(2.51 \times 10^{-4}$	to	$2.55 \times 10^{-4})$
8.	1.32×10^2	$(1.30 \times 10^2$	to	$1.34 \times 10^2)$
9.	2.32×10^{-4}	$(2.30 \times 10^{-4}$	to	$2.34 \times 10^{-4})$
10.	1.38	(1.36	to	1.40)
11.	1.25×10^{-3}	$(1.23 \times 10^{-3}$	to	$1.27 \times 10^{-3})$
12.	2.02×10^{-2}	$(2.00 \times 10^{-2}$	to	$2.04 \times 10^{-2})$
13.	1.07×10^{-9}	$(1.05 \times 10^{-9}$	to	$1.09 \times 10^{-9})$
14.	6.57×10^{-9}	$(6.55 \times 10^{-9}$	to	$6.59 \times 10^{-9})$
15.	7.49×10^{-4}	$(7.47 \times 10^{-4}$	to	$7.51 \times 10^{-4})$
16.	7.40	(7.38	to	7.42)
17.	7.96×10^8	$(7.94 \times 10^8$	to	$7.98 \times 10^8)$

NOTE: If any error is found in this key, grade by Correct answer. The State Office will appreciate a report of any error found.