

## ACCEPTABLE ANSWER FORMATS

Answers must be written in correct mathematical notation. No partial credit will be awarded except on the power round. Unless otherwise specified, all answers must be *exact* and *simplified*.

Graders will take a reasonably lenient interpretation of *simplified* based on the following guidelines and examples. Answers that are not *simplified* will be marked as incorrect. The decisions of the BMT coordinators are final.

Here are some general guidelines for answer simplification. Unless otherwise stated:

- Carry out any reasonable calculations. For instance, you should evaluate any expressions which will take negligible time to evaluate (such as  $\frac{1}{2} + \frac{1}{3}$ ). Unreasonable calculations include large powers (e.g.  $7^8$ ), large factorials, large products, and trigonometric functions which cannot be expressed in terms of radicals.
- Write rational numbers in lowest terms. Decimals are also acceptable, provided they are exact.
- Move all square factors outside radicals. For example, write  $3\sqrt{7}$  instead of  $\sqrt{63}$ .
- Denominators do *not* need to be rationalized. Both  $\frac{\sqrt{2}}{2}$  and  $\frac{1}{\sqrt{2}}$  are acceptable.
- Do not express an answer using a repeated sum or product.

Here are some examples of simplified answers, and some examples of unsimplified answers with their simplified equivalents:

| <b>Examples of Acceptable Answers</b> |                              |
|---------------------------------------|------------------------------|
| 879                                   | $2^{57} + 1$                 |
| $\frac{2}{7}$                         | $\sqrt{\pi}$                 |
| $\frac{1}{3+\sqrt{2}}$                | $\frac{\sqrt{2}}{2}$         |
| 420!                                  | $\cos(1)$                    |
| $\binom{200}{4}$                      | $11 \sqrt[11]{\frac{27}{4}}$ |

| <b>Examples of Unacceptable Answers</b>                            |                              |
|--|------------------------------|
| Unsimplified Answer  | Equivalent Simplified Answer |
| $61 \times 17$   | 1037                         |
| $\sin\left(\frac{\pi}{7}\right) - \sin\left(\frac{6\pi}{7}\right)$ | 0                            |
| $\frac{61}{31415}$   | $\frac{1}{515}$              |
| $\sqrt{3 + 2\sqrt{2}}$   | $1 + \sqrt{2}$               |
| $\sqrt{\frac{7}{9}}$   | $\frac{\sqrt{7}}{3}$         |
| $\sin\left(\frac{\pi}{10}\right)$                                  | $\frac{\sqrt{5}-1}{4}$       |