Symbols

| Symbol | Meaning | Page |
| :---: | :---: | :---: |
| $\ldots$ | and so on | 2 |
| $\approx$ | is approximately equal to | 2 |
| - | multiplication, times | 3 |
| $-a$ | opposite of $a$ | 4 |
| $\frac{1}{a}$ | reciprocal of $a, a \neq 0$ | 4 |
| $b_{1}$ | $b$ sub 1 | 26 |
| $\pi$ | pi; irrational number $\approx 3.14$ | 26 |
| < | is less than | 41 |
| > | is greater than | 41 |
| $\leq$ | is less than or equal to | 41 |
| $\geq$ | is greater than or equal to | 41 |
| $\|x\|$ | absolute value of $x$ | 51 |
| \# | is not equal to | 52 |
| $(x, y)$ | ordered pair | 72 |
| $f(x)$ | $f$ of $x$, or the value of $f$ at $x$ | 75 |
| $m$ | slope | 82 |
| \\| | is parallel to | 84 |
| $\perp$ | is perpendicular to | 84 |
| $(x, y, z)$ | ordered triple | 178 |
| $\left[\begin{array}{ll}1 & 0 \\ 0 & 1\end{array}\right]$ | matrix | 187 |
| $\|A\|$ | determinant of matrix $A$ | 203 |
| $A^{-1}$ | inverse of matrix $A$ | 210 |
| $\sqrt{a}$ | the nonnegative square root of $a$ | 266 |
| $i$ | imaginary unit equal to $\sqrt{-1}$ | 275 |
| $\|z\|$ | absolute value of complex number $z$ | 279 |
| $x \rightarrow+\infty$ | $x$ approaches positive infinity | 339 |
| $\sqrt[n]{a}$ | $n$th root of $a$ | 414 |
| $f^{-1}$ | inverse of function $f$ | 438 |


| Symbol | Meaning | Page |
| :---: | :---: | :---: |
| $e$ | irrational number $\approx 2.718$ | 492 |
| $\log _{b} y$ | $\log$ base $b$ of $y$ | 499 |
| $\log x$ | $\log$ base 10 of $x$ | 500 |
| $\ln x$ | $\log$ base $e$ of $x$ | 500 |
| $n!$ | $n$ factorial; number of permutations of $n$ objects | 684 |
| ${ }_{n} P_{r}$ | number of permutations of $r$ objects from $n$ distinct objects | 685 |
| ${ }_{n} C_{r}$ | number of combinations of $r$ objects from $n$ distinct objects | 690 |
| $P(A)$ | probability of event $A$ | 698 |
| $P(\bar{A})$ | probability of the complement of event $A$ | 709 |
| $\cup$ | union of two sets | 715 |
| $\cap$ | intersection of two sets | 715 |
| $\emptyset$ | empty set | 715 |
| $\subseteq$ | is a subset of | 716 |
| $P(B \mid A)$ | probability of event $B$ given that event $A$ has occurred | 718 |
| $\bar{x}$ | $x$-bar; the mean of a data set | 744 |
| $\sigma$ | sigma; the standard deviation of a data set | 745 |
| $\Sigma$ | summation | 796 |
| $\theta$ | theta | 852 |
| sin | sine | 852 |
| cos | cosine | 852 |
| tan | tangent | 852 |
| csc | cosecant | 852 |
| sec | secant | 852 |
| cot | cotangent | 852 |
| $\sin ^{-1}$ | inverse sine | 875 |
| $\cos ^{-1}$ | inverse cosine | 875 |
| $\tan ^{-1}$ | inverse tangent | 875 |

