

|   | Relationship                          | Initial Values                | Initial Equation | Substitution | Constant of proportionality | Final equation | When $x = 10$ | When $y = 10$ |
|---|---------------------------------------|-------------------------------|------------------|--------------|-----------------------------|----------------|---------------|---------------|
| a | $y$ is inversely proportional to $x$  | When:<br>$x = 8, y = 0.75$    |                  |              |                             |                |               |               |
| b | $y$ is directly proportional to $x^3$ | When:<br>$x = 12, y = 13824$  |                  |              |                             |                |               |               |
| c | $y$ is inversely proportional to $x$  | When:<br>$x = 1, y = 0.2$     |                  |              |                             |                |               |               |
| d | $y$ is directly proportional to $x$   | When:<br>$x = 4, y = 8$       |                  |              |                             |                |               |               |
| e | $y$ is directly proportional to $x^3$ | When:<br>$x = 15, y = 5062.5$ |                  |              |                             |                |               |               |
| f | $y$ is directly proportional to $x^2$ | When:<br>$x = 2, y = 8$       |                  |              |                             |                |               |               |
| g | $y$ is directly proportional to $x^2$ | When:<br>$x = 3, y = 14.4$    |                  |              |                             |                |               |               |
| h | $y$ is directly proportional to $x^2$ | When:<br>$x = 6, y = 14.4$    |                  |              |                             |                |               |               |
| i | $y$ is directly proportional to $x^3$ | When:<br>$x = 4, y = 288$     |                  |              |                             |                |               |               |
| j | $y$ is directly proportional to $x^2$ | When:<br>$x = 4, y = 80$      |                  |              |                             |                |               |               |
| k | $y$ is directly proportional to $x^2$ | When:<br>$x = 1, y = 6$       |                  |              |                             |                |               |               |
| l | $y$ is directly proportional to $x^3$ | When:<br>$x = 3, y = 2.7$     |                  |              |                             |                |               |               |
| m | $y$ is directly proportional to $x^3$ | When:<br>$x = 3, y = 2.7$     |                  |              |                             |                |               |               |
| n | $y$ is directly proportional to $x^3$ | When:<br>$x = 12, y = 864$    |                  |              |                             |                |               |               |
| o | $y$ is directly proportional to $x$   | When:<br>$x = 14, y = 21$     |                  |              |                             |                |               |               |