

# Fill in the Blanks

## Elastic Strings and Work Done

| Modulus of Elasticity | Natural Length | Initial Length | Initial Extension | Initial EPE | Final Length | Final Extension | Final EPE | Work Done to Extend String |
|-----------------------|----------------|----------------|-------------------|-------------|--------------|-----------------|-----------|----------------------------|
| 10 N                  | 1 m            | 1 m            | 0 m               | 0 J         | 1.2 m        | 0.2 m           | 0.2 J     |                            |
|                       | 1 m            | 1 m            |                   | 0 J         | 1.2 m        |                 |           | 0.4 J                      |
| 20 N                  |                |                | 0 m               | 0 J         |              | 0.4 m           |           | 1.6 J                      |
| 20 N                  | 1 m            | 1.2 m          |                   |             | 1.6 m        |                 |           |                            |
|                       | 1 m            | 1.2 m          |                   |             | 1.4 m        |                 |           | 1.2 J                      |
| 20 N                  | 0.8 m          |                |                   |             |              |                 | 4.5 J     | 2.5 J                      |
| 12 N                  | 0.8 m          |                |                   | 1.2 J       |              |                 |           | 1.5 J                      |
| 15 N                  |                |                | 0.25 m            | 0.625 J     |              |                 |           | 5 J                        |
| 24 N                  | 0.6 m          |                | 10 cm             |             |              | 60 cm           |           |                            |
|                       | 30 cm          | 50 cm          |                   |             | 70 cm        |                 |           | 1.8 J                      |