

# 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     | 0.2 J                      |
| 20 N                  | 1 m            | 1 m            | 0 m               | 0 J         | 1.2 m        | 0.2 m           | 0.4 J     | 0.4 J                      |
| 20 N                  | 1 m            | 1 m            | 0 m               | 0 J         | 1.4 m        | 0.4 m           | 1.6 J     | 1.6 J                      |
| 20 N                  | 1 m            | 1.2 m          | 0.2 m             | 0.4 J       | 1.6 m        | 0.6 m           | 3.6 J     | 3.2 J                      |
| 20 N                  | 1 m            | 1.2 m          | 0.2 m             | 0.4 J       | 1.4 m        | 0.4 m           | 1.6 J     | 1.2 J                      |
| 20 N                  | 0.8 m          | 1.2 m          | 0.4 m             | 2 J         | 1.4 m        | 0.6 m           | 4.5 J     | 2.5 J                      |
| 12 N                  | 0.8 m          | 1.2 m          | 0.4 m             | 1.2 J       | 1.4 m        | 0.6 m           | 2.7 J     | 1.5 J                      |
| 15 N                  | 0.75 m         | 1 m            | 0.25 m            | 0.625 J     | 1.5 m        | 0.75 m          | 5.625 J   | 5 J                        |
| 24 N                  | 0.6 m          | 0.7 m          | 10 cm             | 0.2 J       | 1.2 m        | 60 cm           | 7.2 J     | 7 J                        |
| 9 N                   | 30 cm          | 50 cm          | 0.2 m             | 0.6 J       | 70 cm        | 0.4 m           | 2.4 J     | 1.8 J                      |