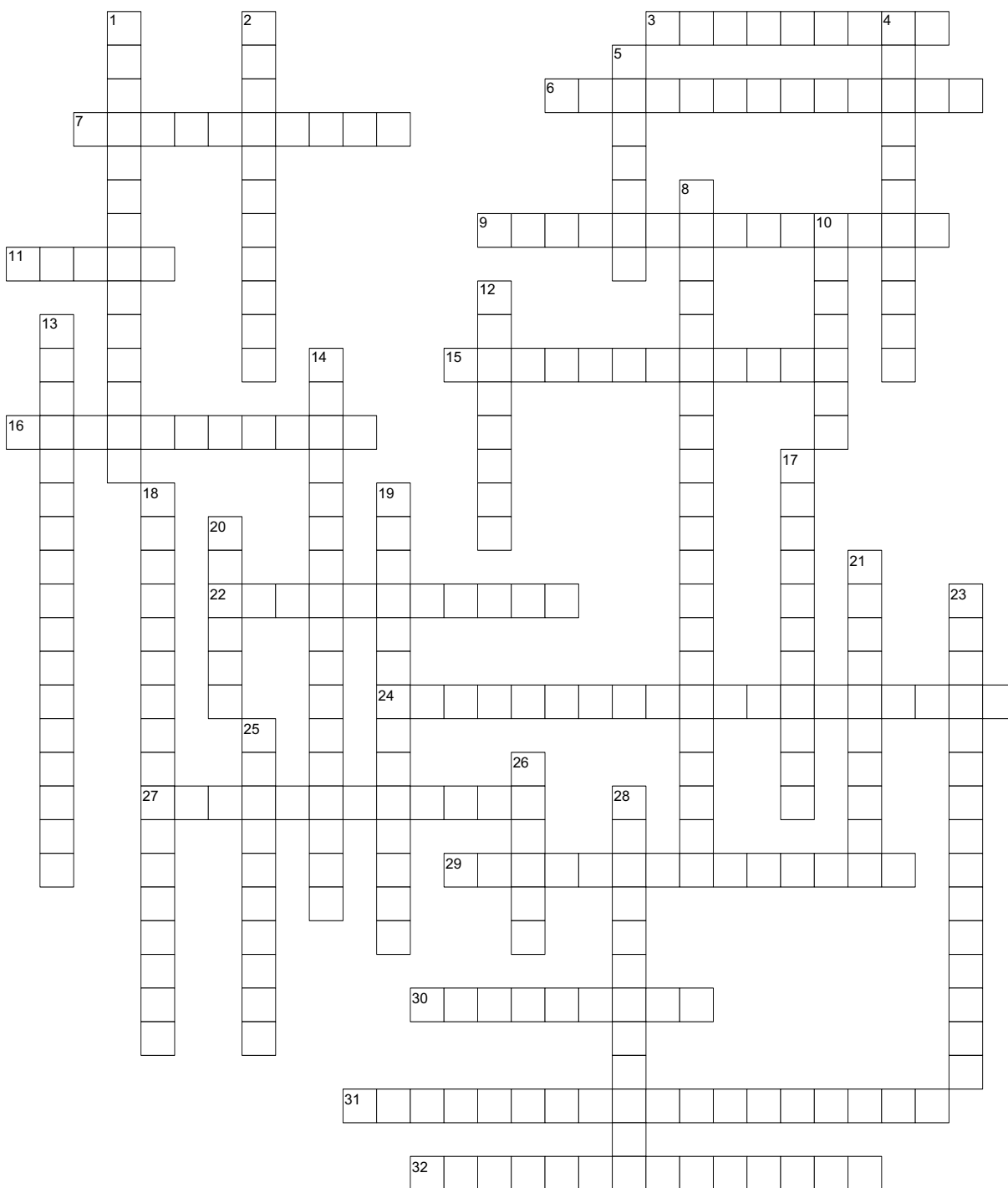


## Lesson 2.3 Key Term Crossword



[www.CrosswordWeaver.com](http://www.CrosswordWeaver.com)

## ACROSS

- 3 The law stating that the stress of a solid is directly proportional to the strain applied to it.
- 6 Method of prestressing concrete whereby the tendons are elongated and anchored while the concrete in the member is cast, and released when the concrete is strong enough to receive the forces from the tendon through bond.
- 7 The fractional increase in a material's length due to stress in tension or to thermal expansion.
- 9 The ratio of actual strength to required strength.
- 11 An influence on a body which causes it to accelerate; quantitatively it is a vector, equal to the body's time rate of change of momentum.
- 15 Refers to reinforcing concrete in which internal stresses have been introduced to reduce potential tensile stresses in the concrete resulting from loads.
- 16 Any alteration of shape or dimensions of a body caused by stresses, thermal expansion or contraction, chemical or metallurgical transformations, or shrinkage and expansions due to moisture change.
- 22 The probability that a component part, equipment, or system will satisfactorily perform its intended function under given circumstances, such as environmental conditions, limitations as to operating time, and frequency and thoroughness of maintenance for a specified period of time.
- 24 The ratio of the increment of some specified form of stress to the increment of some specified form of strain, such as Young's modulus, the bulk modulus, or the shear modulus. Also known as coefficient of elasticity, elasticity modulus, elastic modulus.
- 27 Maximum stress that a material will withstand without permanent deformation.
- 29 The stress required to fracture a material whether by compression, tension, or shear.
- 30 Mechanical property of a material that indicates the ability of the material to handle overloading before it fractures.
- 31 Test methods used to examine an object, material, or system causing permanent damage to its usefulness.
- 32 Sometimes referred to as Tensile Strength; determined by measuring the maximum load a material specimen can carry when in the shape of a rectangular bar or cylindrical can.
- quality requirements; includes process monitoring and the elimination of root causes of unsatisfactory product or service quality performance.
- 2 A measure of how easily a material can be twisted.
- 4 A force with its resultant passing through the centroid of a particular section and being perpendicular to the plane of the section. A force in a direction parallel to the long axis of the structure.
- 5 The condition of a string, wire, or rod that is stretched between two points.
- 8 Test methods used to examine an object, material, or system without impairing its future usefulness.
- 10 The loss of the load-bearing ability of a material under repeated load application, as opposed to a single load.
- 12 The average of the squared differences from the mean.
- 13 Graphical representation of a material's mechanical properties.
- 14 Point at which the deformation is no longer directly proportional to the applied force. Hooke's Law no longer applies.
- 17 When a material is reduced in volume by the application of pressure; the reciprocal of the bulk modulus.
- 18 A statistical measurement of variability.
- 19 The ability to get answers to questions through a conscious, organized process. The answers are usually, but not necessarily, quantitative.
- 20 Change in the length of an object in some direction per unit.
- 21 The collection and analysis of numerical data in large quantities.
- 23 Nominal stress developed in a material at rupture. Not necessarily equal to ultimate strength. Since necking is not taken into account in determining rupture strength, seldom indicates true stress at rupture.
- 25 A mechanical property of a material that shows how effective the material is at absorbing mechanical energy without sustaining any permanent damage.
- 26 The force acting across a unit area in a solid material resisting the separation, compacting, or sliding that tends to be induced by external force.
- 28 Condition caused by collapse, break, or bending, such that a structure or structural element can no longer fulfill its purpose.

## DOWN

- 1 Operational techniques necessary to satisfy all