



INTERFIS PROYECTOS EDUCATIVOS REPOSITORIO

VIGAS

Diagrama de Flectores. Ejercicios cualitativos.

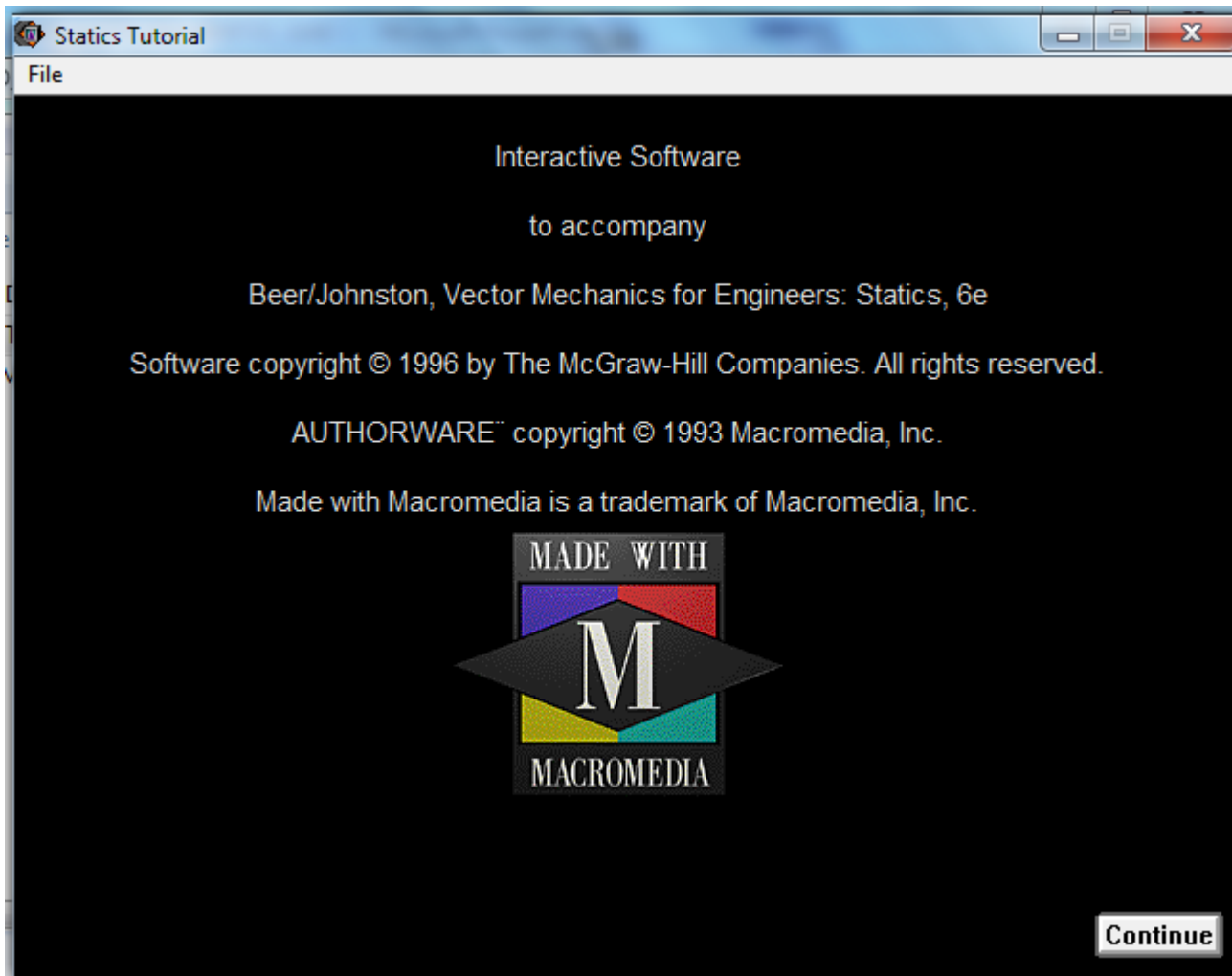
Software STATICS

SHEAR & MOMENT DIAGRAMS. (QUIZZES)

Los ejercicios siguientes se realizan con el **SOFTWARE STATICS**,
incluido en “MECÁNICA VECTORIAL PARA INGENIEROS.
ESTÁTICA”.

Sexta edición. MCGRAW-HILL. 1997 ISBN 84-481-1079-X.

La presentación se realiza exclusivamente con fines educativos,
para facilitar su discusión en clase.

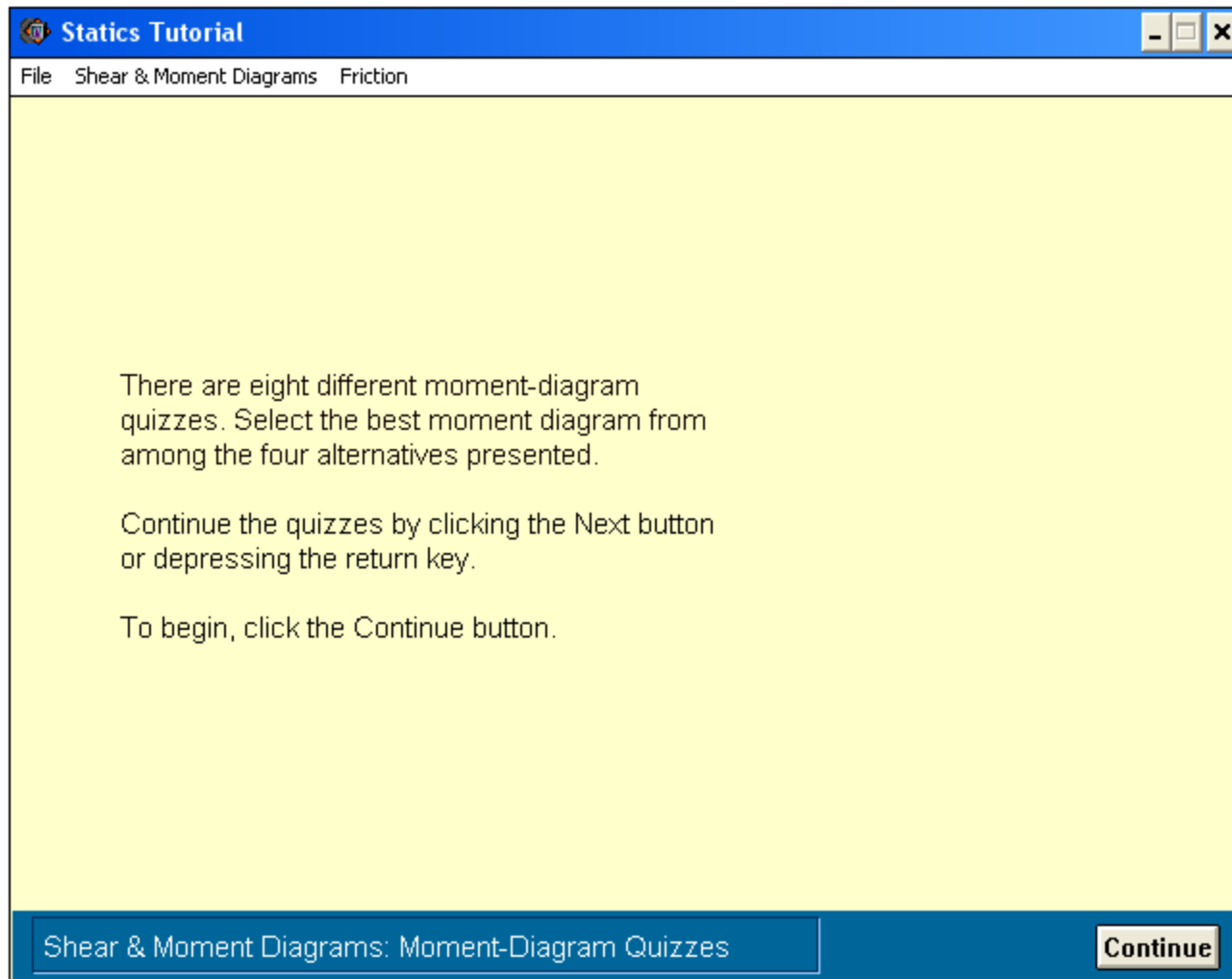




VIGAS

DIAGRAMA DE FLECTORES

DIAGRAMA DE FLECTORES



Presentación realizada a partir de Statics Tutorial

DIAGRAMA DE FLECTORES

EJERCICIOS DE DIAGRAMAS DE FLECTORES

Seleccionar el diagrama de flector correcto de las alternativas que se presentan.

Para realizar la presentación se ha capturado la imagen de los ejercicios propuestos y de las cuatro posibles soluciones para cada uno.

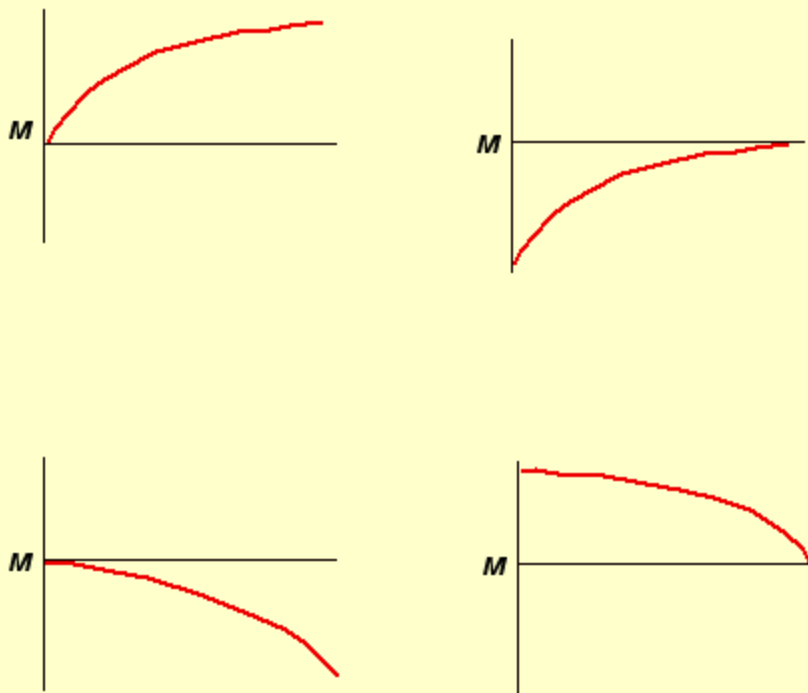
Posteriormente se presenta la imagen inicial señalando con línea punteada la respuesta correcta.

Se realiza con fines didácticos a partir del software STATICS TUTORIAL

El software permite clicar sobre la respuesta que se considera correcta y recibe un mensaje sobre si es la adecuada o no.

Statics Tutorial

File Shear & Moment Diagrams Friction



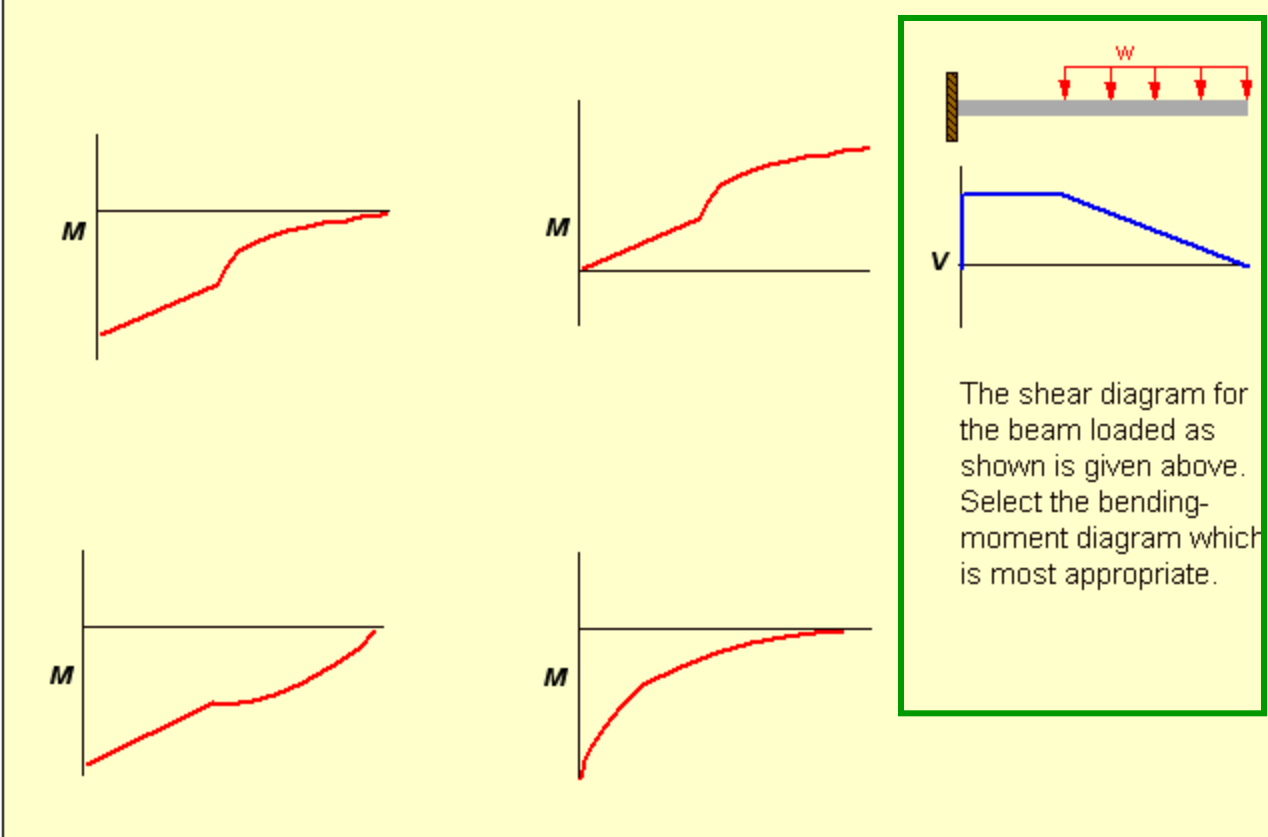
The shear diagram for the beam loaded as shown is given above. Select the bending-moment diagram which is most appropriate.

Shear & Moment Diagrams: Moment-Diagram Quizzes #1

Next

Statics Tutorial

File Shear & Moment Diagrams Friction



The shear diagram for the beam loaded as shown is given above. Select the bending-moment diagram which is most appropriate.

Shear & Moment Diagrams: Moment-Diagram Quizzes #2

Next

Statics Tutorial

File Shear & Moment Diagrams Friction

The shear diagram for the beam loaded as shown is given above. Select the bending-moment diagram which is most appropriate.

Shear & Moment Diagrams: Moment-Diagram Quizzes #3

Next

Statics Tutorial

File Shear & Moment Diagrams Friction

The shear diagram for the beam loaded as shown is given above. Select the bending-moment diagram which is most appropriate.

Shear & Moment Diagrams: Moment-Diagram Quizzes #4

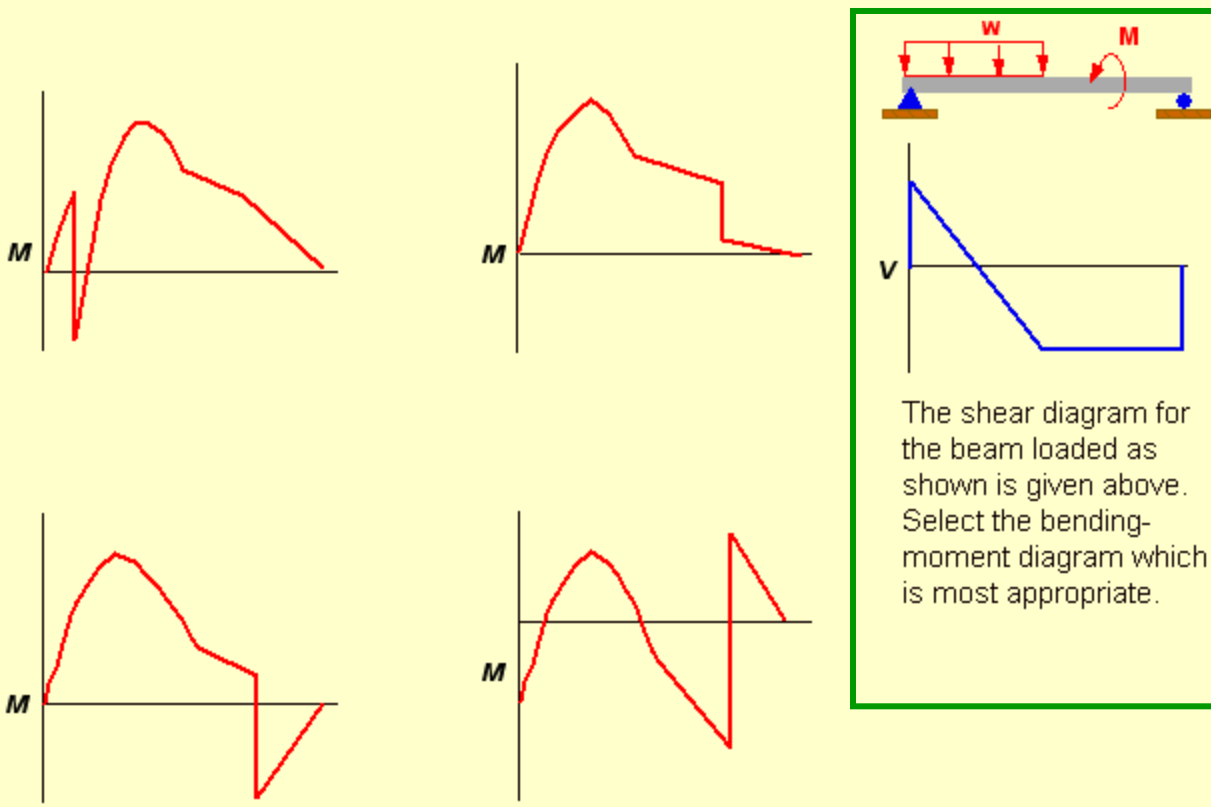
Next

DIAGRAMA DE FLECTORES

Q#5

Statics Tutorial

File Shear & Moment Diagrams Friction



The image shows a software interface for a statics tutorial. It features a main window titled "Statics Tutorial" with a menu bar containing "File", "Shear & Moment Diagrams", and "Friction". The main content area is yellow and contains four bending moment diagrams (M) and one shear force diagram (V). The diagrams are arranged in a 2x2 grid. The top-left diagram shows a moment curve that starts at zero, goes negative, then positive, and ends at zero. The top-right diagram shows a moment curve that starts at zero, goes positive, then negative, and ends at zero. The bottom-left diagram shows a moment curve that starts at zero, goes positive, then negative, and ends at zero. The bottom-right diagram shows a moment curve that starts at zero, goes positive, then negative, and ends at zero. The shear force diagram (V) is shown in a green box on the right. It shows a shear force that starts at a positive value, decreases linearly to zero, then jumps to a negative value, and remains constant until the end of the beam. The text in the green box reads: "The shear diagram for the beam loaded as shown is given above. Select the bending-moment diagram which is most appropriate." At the bottom of the window, there is a blue bar with the text "Shear & Moment Diagrams: Moment-Diagram Quizzes #5" and a "Next" button.

M

M

M

M

V

The shear diagram for the beam loaded as shown is given above. Select the bending-moment diagram which is most appropriate.

Shear & Moment Diagrams: Moment-Diagram Quizzes #5

Next

Statics Tutorial

File Shear & Moment Diagrams Friction

The shear diagram for the beam loaded as shown is given above. Select the bending-moment diagram which is most appropriate.

Shear & Moment Diagrams: Moment-Diagram Quizzes #6

Next

Statics Tutorial

File Shear & Moment Diagrams Friction

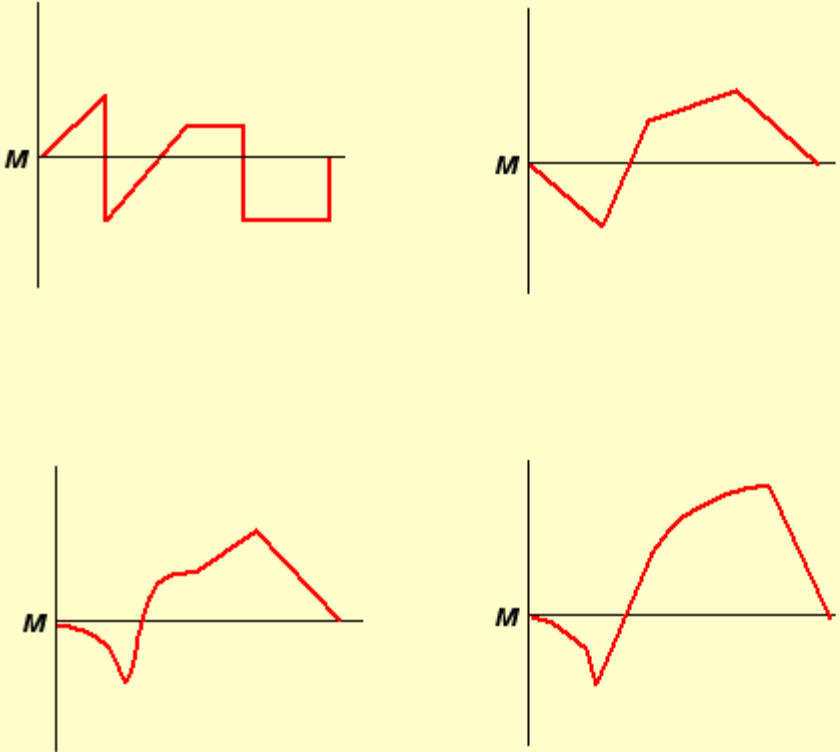
The shear diagram for the beam loaded as shown is given above. Select the bending-moment diagram which is most appropriate.

Shear & Moment Diagrams: Moment-Diagram Quizzes #7

Next

Statics Tutorial

File Shear & Moment Diagrams Friction



The shear diagram for the beam loaded as shown is given above. Select the bending-moment diagram which is most appropriate.

Shear & Moment Diagrams: Moment-Diagram Quizzes #8

Next

DIAGRAMA DE FLECTORES

EJERCICIOS DE DIAGRAMAS DE FLECTORES

Q#1

El diagrama de cortante para la viga cargada se muestra arriba (en recuadro verde)

Indicar el diagrama de momento más apropiado de las cuatro respuestas alternativas que se presentan

Q#2

El diagrama de cortante para la viga cargada se muestra arriba (en recuadro verde)

Indicar el diagrama de momento más apropiado de las cuatro respuestas alternativas que se presentan

DIAGRAMA DE FLECTORES

EJERCICIOS DE DIAGRAMAS DE FLECTORES

Q#3

El diagrama de cortante para la viga cargada se muestra arriba (en recuadro verde)

Indicar el diagrama de momento más apropiado de las cuatro respuestas alternativas que se presentan

Q#4

El diagrama de cortante para la viga cargada se muestra arriba (en recuadro verde)

Indicar el diagrama de momento más apropiado de las cuatro respuestas alternativas que se presentan

DIAGRAMA DE FLECTORES

EJERCICIOS DE DIAGRAMAS DE FLECTORES

Q#5

El diagrama de cortante para la viga cargada se muestra arriba (en recuadro verde)

Indicar el diagrama de momento más apropiado de las cuatro respuestas alternativas que se presentan

Q#6

El diagrama de cortante para la viga cargada se muestra arriba (en recuadro verde)

Indicar el diagrama de momento más apropiado de las cuatro respuestas alternativas que se presentan

DIAGRAMA DE FLECTORES

EJERCICIOS DE DIAGRAMAS DE FLECTORES

Q#7

El diagrama de cortante para la viga cargada se muestra arriba (en recuadro verde)

Indicar el diagrama de momento más apropiado de las cuatro respuestas alternativas que se presentan

Q#8

El diagrama de cortante para la viga cargada se muestra arriba (en recuadro verde)

Indicar el diagrama de momento más apropiado de las cuatro respuestas alternativas que se presentan

File Shear & Moment Diagrams Friction

M

M

M

M

w

V

The shear diagram for the beam loaded as shown is given above. Select the bending-moment diagram which is most appropriate.

Shear & Moment Diagrams: Moment-Diagram Quizzes #1

Next

Statics Tutorial

File Shear & Moment Diagrams Friction

The shear diagram for the beam loaded as shown is given above. Select the bending-moment diagram which is most appropriate.

Shear & Moment Diagrams: Moment-Diagram Quizzes #2

Next

The screenshot shows a software window titled "Statics Tutorial" with a menu bar containing "File", "Shear & Moment Diagrams", and "Friction". The main area displays a quiz question. On the right, a beam is shown with a triangular load w and a shear force diagram V that is constant at the left end and decreases linearly to zero at the right end. Below this, a text box asks: "The shear diagram for the beam loaded as shown is given above. Select the bending-moment diagram which is most appropriate." Four bending moment diagrams M are shown as options. The bottom-left diagram, which shows a smooth curve starting from the origin and ending at a positive value, is circled in green. The bottom status bar contains the text "Shear & Moment Diagrams: Moment-Diagram Quizzes #3" and a "Next" button.

Statics Tutorial

File Shear & Moment Diagrams Friction

The shear diagram for the beam loaded as shown is given above. Select the bending-moment diagram which is most appropriate.

Shear & Moment Diagrams: Moment-Diagram Quizzes #4

Next

Statics Tutorial

File Shear & Moment Diagrams Friction

M

M

M

M

V

The shear diagram for the beam loaded as shown is given above. Select the bending-moment diagram which is most appropriate.

Shear & Moment Diagrams: Moment-Diagram Quizzes #5

Next

The screenshot shows a software window titled "Statics Tutorial" with a menu bar containing "File", "Shear & Moment Diagrams", and "Friction". The main area contains a quiz question. On the right, a beam is shown with a pin support at the left end and a roller support at the right end. A triangularly distributed load w is applied downwards, starting at zero at the left end and increasing linearly to its maximum value at the right end. Below the beam, a shear force diagram V is shown in blue, starting at a positive value at the left end, decreasing linearly to zero at the right end, and then jumping to a negative constant value. On the left, four bending moment diagrams M are shown in red. The top-right diagram is circled in green and shows a curve that starts at zero at the left end, increases to a maximum value, and then decreases to zero at the right end. The other three diagrams show various other shapes: a curve that starts at a positive value and decreases to zero; a curve that starts at zero, increases to a peak, and then decreases to a negative value; and a curve that starts at a positive value, remains constant, and then increases to a peak.

The shear diagram for the beam loaded as shown is given above. Select the bending-moment diagram which is most appropriate.

Shear & Moment Diagrams: Moment-Diagram Quizzes #6

Next

Statics Tutorial

File Shear & Moment Diagrams Friction

M

M

M

V

The shear diagram for the beam loaded as shown is given above. Select the bending-moment diagram which is most appropriate.

Shear & Moment Diagrams: Moment-Diagram Quizzes #7

Next

Statics Tutorial

File Shear & Moment Diagrams Friction

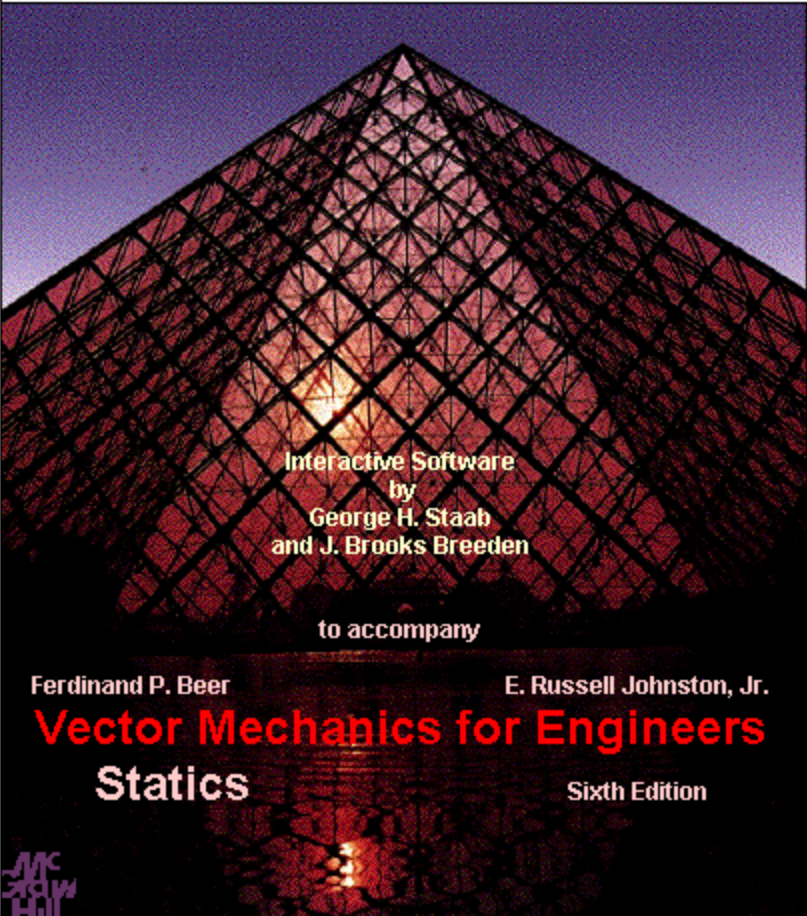
The shear diagram for the beam loaded as shown is given above. Select the bending-moment diagram which is most appropriate.

Shear & Moment Diagrams: Moment-Diagram Quizzes #8

Next

Statics Tutorial

File Info Contents



Interactive Software
by
George H. Staab
and J. Brooks Breeden

to accompany

Ferdinand P. Beer E. Russell Johnston, Jr.
Vector Mechanics for Engineers
Statics Sixth Edition

Mc
Graw
Hill

About the Authors

George H. Staab, Associate Professor of Applied Mechanics at The Ohio State University, received his BS (1972) and MS (1973) in Aeronautical Engineering from Purdue University. After graduating, he worked for three years as a stress analyst at Sikorsky Aircraft. In 1976, he returned to Purdue University, and graduated with a Ph.D. in 1979.

He joined the faculty of the Department of Engineering Mechanics at The Ohio State University as an Assistant Professor, and in 1984, he was promoted to Associate Professor. His research interests include numerical methods, composite materials, and experimental techniques.

J. Brooks Breeden, Professor in the Austin E. Knowlton School of Architecture at The Ohio State University, received his BS (1964) and MS (1966) in Architecture from Purdue University. He worked for three years as a design architect at the firm of Skidmore, OWing, Merrill and Knapp in New York City. In 1969, he returned to Purdue University, and graduated with a Ph.D. in 1971. He joined the faculty of the School of Architecture at The Ohio State University in 1972, and was promoted to Professor in 1984. His research interests include the history of architecture, the theory of architecture, and the design process.

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