



INTERFIS PROYECTOS EDUCATIVOS REPOSITORIO

VIGAS

Diagrama de Flectores. Ejercicios cualitativos.

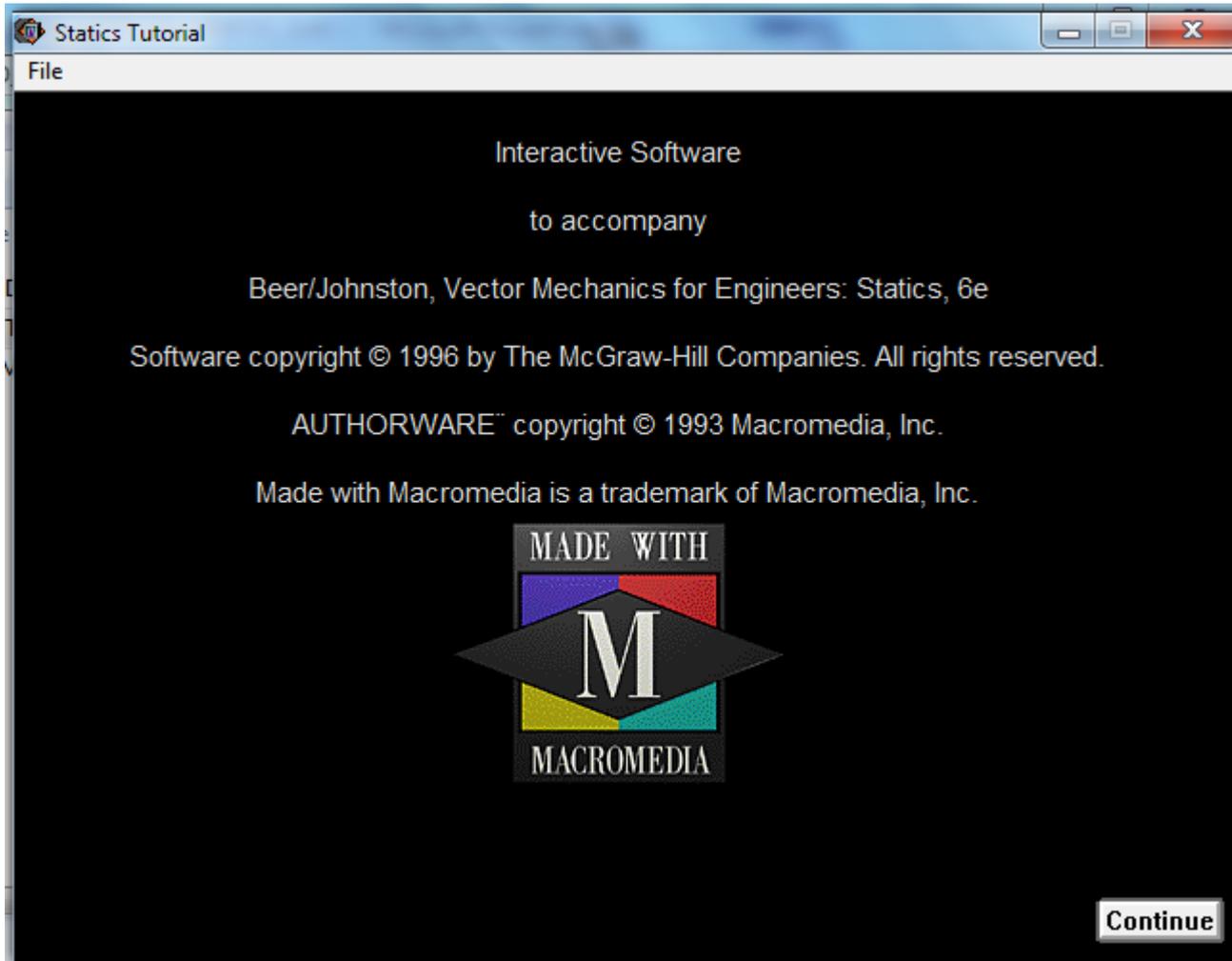
Software STATICS

SHEAR & MOMENT DIAGRAMS. (QUIZZES)

Los ejercicios siguientes se realizan con el **SOFTWARE STATICS**,
incluido en “MECÁNICA VECTORIAL PARA INGENIEROS.
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Sexta edición. MCGRAW-HILL. 1997 ISBN 84-481-1079-X.

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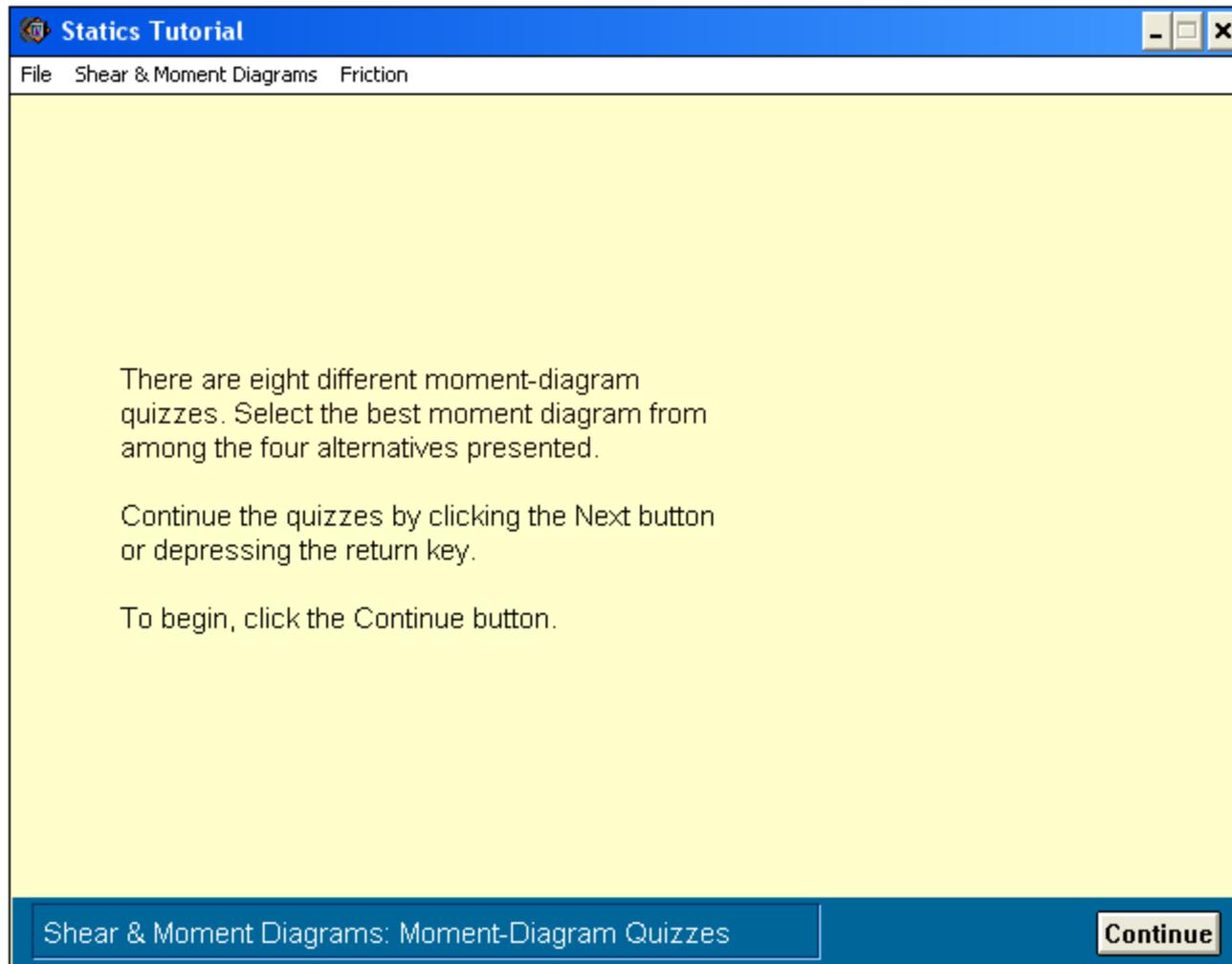




VIGAS

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

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 #5

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 #6

Next

Statics Tutorial

File Shear & Moment Diagrams Friction

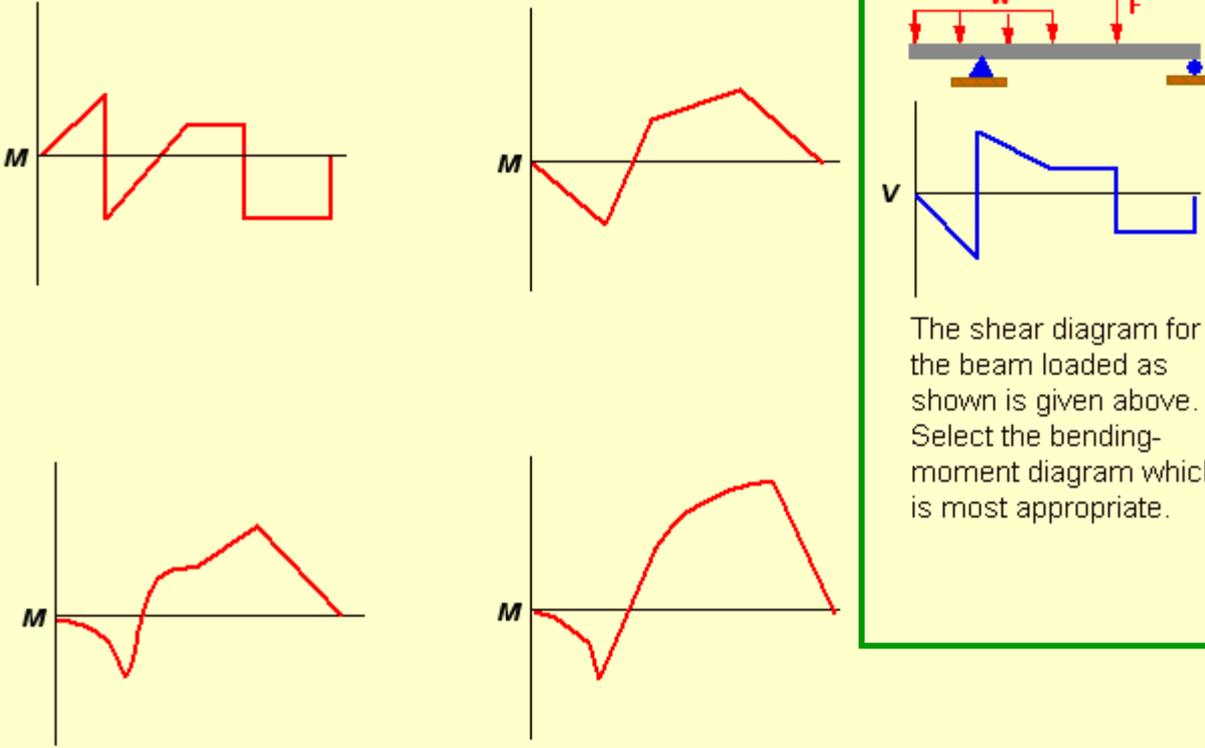
The shear diagram for the beam loaded as shown is given above. Select the bending-moment diagram which is most appropriate.

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

Statics Tutorial

File Shear & Moment Diagrams Friction

M

M

M

M

V

w

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

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 beam problem. On the right, a beam is shown with a pin support at the left end and a roller support at the right end. A uniformly distributed load w is applied over the first half of the beam, and a clockwise moment M is applied at the right end. Below the beam is a shear force diagram V (blue line) that starts at a positive value, decreases linearly to zero at the midpoint, and then remains constant at a negative value until the right end. To the left of the beam are four candidate bending moment diagrams M (red lines). The top-right diagram is circled in green. The text below the diagrams asks to select the most appropriate bending moment diagram.

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

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 diagram shows a beam fixed to a wall on the left and free on the right. A triangularly distributed load w is applied downwards, increasing from zero at the wall to a maximum at the free end. Below this, a shear force diagram V is shown as a blue curve that starts at a positive value at the wall and decreases to zero at the free end. The question asks to select the most appropriate bending moment diagram M from four options. The correct option, which shows a cubic curve starting at zero at the wall and increasing to a maximum at the free end, is highlighted with a green dotted circle. A text box on the right explains: "The shear diagram for the beam loaded as shown is given above. Select the bending-moment diagram which is most appropriate." At the bottom, a blue bar contains the text "Shear & Moment Diagrams: Moment-Diagram Quizzes #7" and a "Next" button.

Statics Tutorial

File Shear & Moment Diagrams Friction

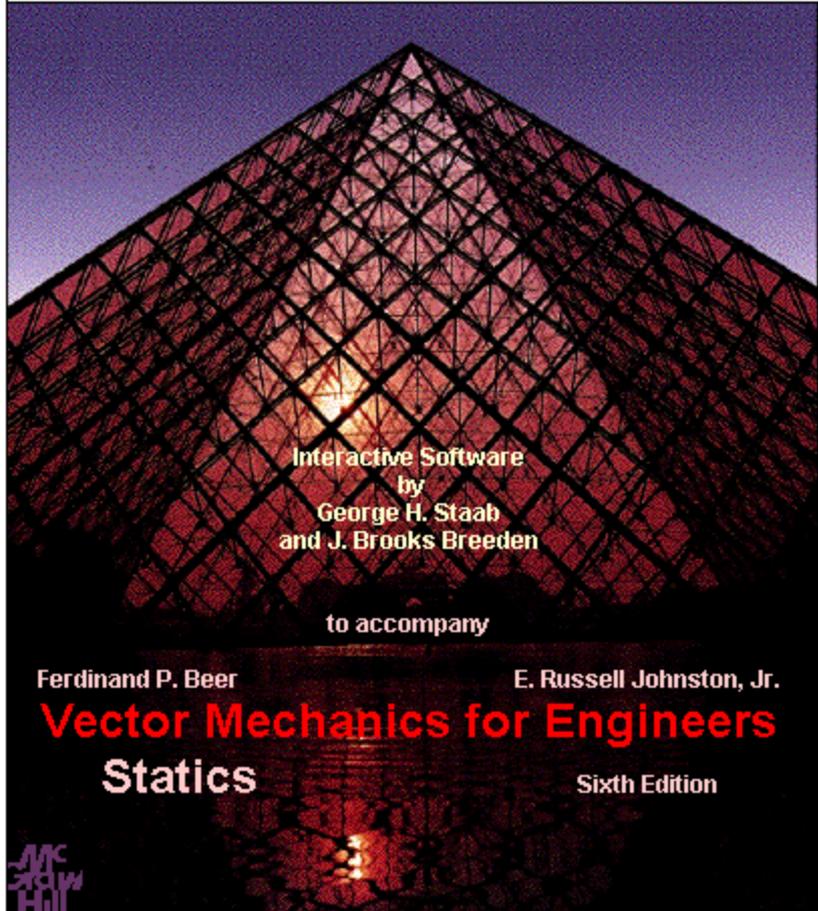
The shear diagram for the beam loaded as shown is given above. Select the bending-moment diagram which is most appropriate.

Shear & Moment Diagrams: Moment-Diagram Quizzes #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

McGraw-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 (1968) and MS (1970) 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 1973, he returned to Purdue University, and graduated with a Ph.D. in 1976.

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