

ENGR 250– STATICS

Homework Check List: 4-1

The check lists can be found by opening up the links to submit the hw

form when turning in your homework. Attach this sheet as the first page of your calcs. See syllabus for which problems were assigned. Do not attach problems that weren't assigned.

Make sure you follow the format guidelines listed on the syllabus.

Place a check ✓ in the box to the left of the problem number for those problems that you got **right**.

Place an X if you got the **wrong** answer.

Leave it blank if you didn't do it or it wasn't assigned.

- | | | | |
|--------------------------------|--------------------------------|---------------------------------|---------------------------------|
| <input type="checkbox"/> 4-1-1 | <input type="checkbox"/> 4-1-5 | <input type="checkbox"/> 4-1-9 | <input type="checkbox"/> 4-1-13 |
| <input type="checkbox"/> 4-1-2 | <input type="checkbox"/> 4-1-6 | <input type="checkbox"/> 4-1-10 | <input type="checkbox"/> 4-1-14 |
| <input type="checkbox"/> 4-1-3 | <input type="checkbox"/> 4-1-7 | <input type="checkbox"/> 4-1-11 | <input type="checkbox"/> 4-1-15 |
| <input type="checkbox"/> 4-1-4 | <input type="checkbox"/> 4-1-8 | <input type="checkbox"/> 4-1-12 | <input type="checkbox"/> 4-1-16 |

Total number of problems attempted above: _____

For Instructors use:

Please work on the following format issues for next time:

- | | |
|---|---|
| <input type="checkbox"/> Neatness | <input type="checkbox"/> Don't write on the back |
| <input type="checkbox"/> Use a ruler | <input type="checkbox"/> Not placing a check mark or an X above for the hw attached |
| <input type="checkbox"/> Significant figures | <input type="checkbox"/> Missing this cover sheet |
| <input type="checkbox"/> One problem per page | <input type="checkbox"/> Other |
| <input type="checkbox"/> Heading on each page | |
| <input type="checkbox"/> Hw not in order | |

Problems: _____ / 7 points

Format: _____ / 3 (may be prorated if not all problems were attempted)

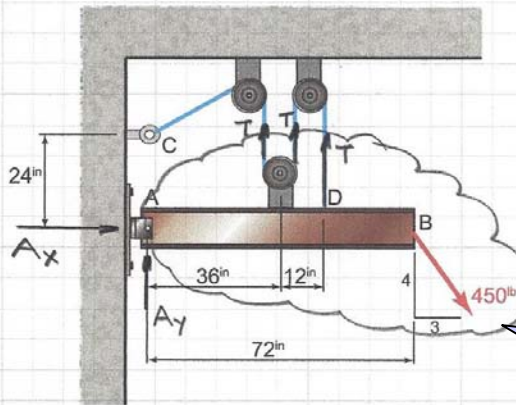
Total: _____ / 10

Name and page number/total pages on each page

JANE DOE PG 6/6

4-1-12

Find the reactions at A and the tension in wire CD.



Answer(s):

$$\begin{aligned} A_x &= 270 \text{ lb} \leftarrow \\ A_y &= 288 \text{ lb} \downarrow \\ T &= 216 \text{ lb} \end{aligned}$$

Summarize your answers.

Bubble to isolate the FBD. All forces are drawn and clearly labeled.

MAP

$$\sum M_A \Rightarrow T$$

$$\sum F_x \Rightarrow A_x$$

$$\sum F_y \Rightarrow A_y$$

Summarize what you are going to do.

State your equations and show all terms.

$$\begin{aligned} \sum M_A = 0 &= 2T(36) + T(48) - \left(\frac{4}{5}\right)450(72) \\ T &= \underline{\underline{216 \text{ lb}}} \end{aligned}$$

$$\sum F_x = 0 = A_x + \left(\frac{3}{5}\right)450$$

$$A_x = -270 = \underline{\underline{270 \text{ lb} \leftarrow}}$$

$$\sum F_y = 0 = A_y + 3T - \left(\frac{4}{5}\right)450$$

$$A_y = -288 = \underline{\underline{288 \text{ lb} \downarrow}}$$

Use superscripts for units to avoid someone from interpreting it to be 27016.

Double underline or box your answers.

Note:

- All numbers written are rounded to 3 or 4 significant figures, not just the answer.
- Take pride in your work, someday you will be paid big bucks to do professional quality work and quality begins now, not the first days of employment.