12	Problem 12.26	I have inserted a note to remind that v_A could be greater than v_B because the figure confuses, so they could not to include absolute value to the formula	Not an error, although it's a reasonable clarification. I'm not sure how a single figure could show both possibilities. Leave the main text alone.
12	Problem 12.154	There is no solution for velocity at t=0.25s in ISM.	Error confirmed. The problem wording in the ISM also needs to be changed to match the text, and the EOB answer needs to be updated. See the insert material which follows after this errata list.
12	Problem 12.200	The typo is in the textbook. There is 'from' instead of 'for'.	Error confirmed. Change "from" to "for" in reprint.
14	Problem 14.3	The textbook and the ISM are using different values of force, and we think that ISM should be corrected to match the textbook.	Error confirmed. The problem wording and art in the ISM also needs to be changed to match the text, and the EOB answer needs to be updated. See the insert material which follows after this errata list.
14	Problem 14.13	TYPO in the textbook: "his the ground." should be "hits the ground."	Error confirmed. Change "his" to "hits" in reprint.
14	Problem 14.33	In the ISM incorrect answer: v_D = 17.7 m/s (not 7.7 m/s)	Error confirmed. Last line should end with 17.7 m/s, as in final ISM MS.
15	Problem 15.82	Given the initial data (and even data within rather wide range) the block can strike the plate again, even several times. And it is too hard to calculate wether it happens. So, I've changed the data the next way: the box weighs less then the plate now. So it changes the direction of its velocity, and there will no multiple collisions.	Intent should be clearer. In reprint, change the last part to read "determine the maximum compression imparted to the spring by the initial impact. Take *e* = 0.8 between the box and the plate. Assume that the plate slides smoothly and reaches full compression before any secondary impact with the box." Do not change ISM or end-of-book answer. If the tutorial is supposed to mirror the text, then make the above change in the tutorial as well, rather than making the box weigh less than the plate.

15	Problem 15.108	The picture in the textbook is incorrect. There is two G_2 points. The figure was changed with G_0.	There is an error, but it is not with the labeling G_1 and G_2. The intent of the figure is to show a shift in the girl's center of gravity between the first position and the middle one. So the black dot in the first position (on the right) should be higher up the rope, let's say just above the girl's hand, and there should be a black dot at the junction of the three ropes in the middle position, just the same as the black dot in the last position (on the left).
4	Problem 4.55	Typo in the ISM: question is asking to find force, however ISM mark 2 answers – Force and Moment. Also there are display of matrix issue.	Error confirmed. Remove the first of the threee "Ans." labels. Correct the matrix display to match final ISM MS.
5	Problem 5.18	incorrect angle on the picture	Not sure what they mean. If the issue is that the angle show in the the text is not actually 26 degrees (not to scale), that is not a big deal and doesn't require a correction.
5	Problem 5.44	incorrect angle on the picture	Not sure what this means. If the issue is that the angle show in the text is not actually 18 degrees (not to scale), that is not a big deal and doesn't require a correction.
6	Problem 6.23	An error in ISM. The answer, which is not requested in the problem was tagged with "ans" note.	Not sure what this means. But I do see some errors. In the ISM, in the solution section on joint *D*, change subscript *DB* to subscript *DE*, twice. And in the last line of the solution, change 0.577 P (T) to 0.289 P(T). Make corresponding changes to the end-of-book answer.
6	Problem 6.28	An error in the calculations in ISM was found: the value CH is calculated incorrectly. In addition, it is not required to estimate it according to the task. It seems to be a misprint, and there should be CJ.	In the ISM, make the following changes: (1) add an additional term of - 1500 to the calculation for F_CH, per the MS; (2) Delete the "Ans." tag after the value for F_CH; (3) Restore part of the MS material that was hand-deleted by author, beginning with "Method of joints" and ending with the answer

			for F_CJ.
6	Problem 6.30	An error in ISM. The answer, which is not requested in the problem was tagged with "ans" note.	Delete the first "Ans." tag in the ISM solution.
6	Problem 6.34	An error in ISM. The answer, which is not requested in the problem was tagged with "ans" note: the force implemented to GJ is just an intermediate value.	Delete the first "Ans." tag in the ISM solution. (The end-of-book answer does not need to show F_GJ, but it does no harm and therefore no change is needed.)
6	Problem 6.67	Inconsistency between ISM and textbook. Question wording is different in ISM and Textbook.	Error confirmed. Change problem wording in ISM to match main text.
1R	Review Problem R1.2	There is an error in a_A for part B in ISM	In the ISM, in the first equation for part b), block A, change 20(0.3) to 50 - (20)(0.3).
1R	Review Problem R1.3	There is a typo in the textbook - x is missing in F: F ={10i+6yj+2zk}	I don't see any error. The x-component of the force is given as constant at 10, and that is how the solution treats it.
9	Problem 9.111	There is misprint in the ISM. Should be (5+h/5)	I am not sure what is being referred to. In the solution 9.111 that I am looking at, at the start A = theta z-bar r-wigglybar L should read A = theta SIGMA r-wigglybar L. However, the expression (10 + h/5) in the long middle equation is correct and should not change to 5 + h/5.
20	Problem 20.52	There is a wrong answer for a_B (I and j-components)	These problems are tricky, but on a quick review using a sketch and calculator, I see nothing amiss. Please state what values you think the components should have.
19	Problem 19.32	There is wrong solution in ISM.	Error confirmed. At one point there was confusion over what problem would appear as 19.32, and apparently we ended up duplicating the solution for 19.35 as the solution for 19.32. Need to trace back the pickup source for this problem and then pick up the correct solution. UPDATE: THE CORRECT SOLUTION AND ANSWER ARE PROVIDED BELOW.

19	Problem 19.34	wrong answer in ISM (I_A equals m*l^2/3) but when we use correct formula the answer has no physical sence	I see no error. We are not concerned with angular momentum about the fixed horizontal bar (although that, too, is conserved) but rather with angular momentum about the gymnast's own center of mass.
14	Problem 14.22	The solution and answer assume spring constants in lb/ft but the art shows them in lb/in.	Art in problem should be changed to show units of the spring constants as lb/ft rather than lb/in. This carries over into the problem art as it appears in the ISM.

Exercise 12-154:

For the ISM:

(1) Just before the section called "Acceleration" add a section on velocity:

> **Velocity:** When t = 0.25 s, the vertical component of velocity is 8 sin(40°) – 9.81(0.25) = 2.690 m/s. Then

$$v = \sqrt{6.128^2 + 2.690^2} = 6.692 = 6.69 \text{ m/s} \qquad \textbf{Ans.}$$

$$\theta = \tan^{-1}(2.690 / 6.128) = 23.697° = 23.7° \qquad \textbf{Ans.}$$

(2) In the section on Acceleration, right after "…23.70° with the x axis" add a parenthetic note before the concluding period:

(which confirms the velocity angle found above).

For back-of-book answer 12-154:

Right below the equation that begins with "y =", add the following:

v = 6.69 m/s
θ = 23.7°

Exercise 14-3:

For the ISM:

SOLUTION

Equations of Motion: Since the crate slides, the friction force developed between the crate and its contact surface is $F_f = \mu_k N = 0.2N$. Applying Eq. 13–7, we have

$$+\uparrow \Sigma F_y = ma_y; \qquad N + 1000\left(\frac{3}{5}\right) - 800 \sin 30^\circ - 100(9.81) = 100(0)$$

$$N = 1321 \text{ N}$$

Principle of Work and Energy: The horizontal components of force 800 N and 1000 N which act in the direction of displacement do *positive* work, whereas the friction force $F_f =$ 0.2(1321) = 264.2 N does *negative* work since it acts in the opposite direction to that of displacement. The normal reaction N, the vertical components of the 800 N and 1000 N force and the weight of the crate do not displace, hence they do no work. Since the crate is originally at rest, $T_1 = 0$. Applying Eq. 14–7, we have

$$T_1 + \sum U_{1-2} = T_2$$

$$0 + 800 \cos 30^\circ(s) + 1000\left(\frac{4}{5}\right)s - 264.2s = \frac{1}{2}(100)\left(6^2\right)$$

$$s = 3.54 \text{ m} \qquad \textbf{Ans.}$$

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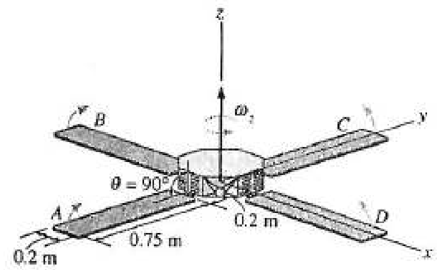
For back-of-book answer 14-3:
Change 1.35 m to 3.54 m.

Exercise 19-32: Correct solution is pictured below. End-of-book answer is boxed in green.

19-32. The space satellite has a mass of 125 kg and a moment of inertia $I_z = 0.940\ \text{kg}\cdot\text{m}^2$, excluding the four solar panels A, B, C, and D. Each solar panel has a mass of 20 kg and can be approximated as a thin plate. If the satellite is originally spinning about the z axis at a constant rate $\omega_z = 0.5$ rad/s when $\theta = 90°$, determine the rate of spin if all the panels are raised and reach the upward position, $\theta = 0°$, at the same instant.



Mass Moment of Inertia : The mass moment inertia of the satelite about the z axis when its solar panels are in lowered (flat) position is

$$(I_z)_1 = 0.940 + 4\left[\frac{1}{12}(20)\left(0.2^2 + 0.75^2\right) + 20\left(0.575^2\right)\right]$$
$$= 31.4067\ \text{kg}\cdot\text{m}^2$$

The mass moment inertia of the satelite about z axis when its solar panels are in upright position is

$$(I_z)_1 = 0.940 + 4\left[\frac{1}{12}(20)\left(0.2^2\right) + 20\left(0.2^2\right)\right] = 4.4067\ \text{kg}\cdot\text{m}^2$$

Conservation of Angular Momentum : Applying Eq. 19 – 17, we have

$$(H_z)_1 = (H_z)_2$$
$$31.4067(0.5) = 4.4067(\omega_z)_2$$
$$(\omega_z)_2 = 3.56\ \text{rad/s} \qquad \textbf{Ans}$$

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