In the assigned problems, the numbers refer to the 5th edition, the numbers in parentheses refer to the corresponding problem in the 4th edition. Where no such problem is available, the problem is written out in its entirety.

1. Textbook, Chapter 15, Section 7: # 8(8), 14(14), 16(16), 18, 20, 28(26), 30(28), 32(30), 36(34).

Here are the problems that do not appear in the 4th ed.

#18. Use a triple integral to find the volume of the solid bounded by the cylinder \( y = x^2 \) and the planes \( z = 0, z = 4, \) and \( y = 9. \)

#20. Use a triple integral to find the volume of the solid enclosed by the paraboloid \( x = y^2 + z^2 \) and the plane \( x = 16. \)

2. Textbook, Chapter 15, Section 8: #8(8), 12, 18(18), 22(22), 34(34), 36(36)

#12. Find the volume of the solid that lies within both the cylinder \( x^2 + y^2 = 1 \) and the sphere \( x^2 + y^2 + z^2 = 4. \)

3. Chapter 15, Section 9: #10(10), 14(14), 20, 22(22).

#20. Evaluate the integral by making an appropriate change of variables:

\[
\iint_R (x + y)e^{x^2 - y^2} \, dA
\]

where \( R \) is the rectangle enclosed by the lines \( x - y = 0, x - y = 2, x + y = 0, \) and \( x + y = 3. \)