



HOW TO CALCULATE STOCK POND WATER VOLUMES AND DEPTH WITHOUT GETTING YOUR FEET WET

BY
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1. Sketch surface shape of impoundment in gridded square on worksheet on back of form UM-2500-13.
2. Refer to Figure I of this page and select the basic shape that most closely resembles the shape of the pond.
3. You will see a section and page number inside of the shape you have selected.
4. Turn to the page and section you have selected.
5. In the section you have selected you will find several different shapes.
6. Pick the diagram that fits closest to your impoundment.
7. Each diagram will have a configuration number (CN).
8. Go to worksheet and place the CN in appropriate block.
9. Each CN will have the dimensions required to calculate EMV.
10. Enter the required dimensions for volume calculations on the worksheet.
11. Enter formula into appropriate block on worksheet.
12. Calculate volume with given formula for EMV.
13. Decimal Point Placement

8 Digit Answer (a) EMV = _ _ . _ _ _ _ _ A. F.

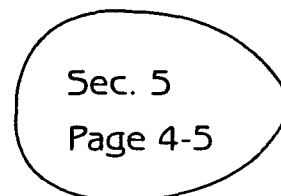
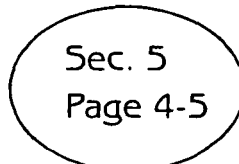
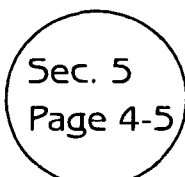
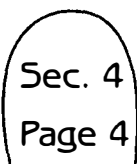
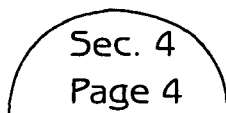
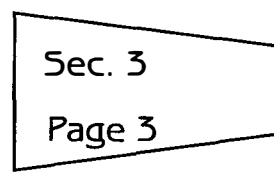
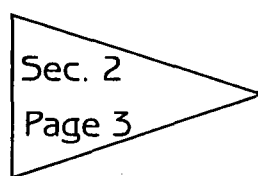
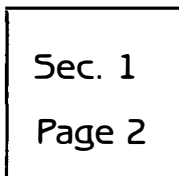
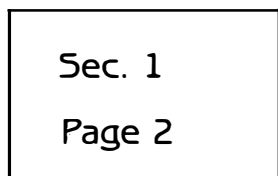
7 Digit Answer (b) EMV = _ . _ _ _ _ _ A. F.

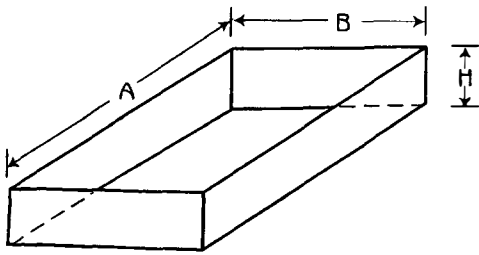
6 Digit Answer (c) EMV = 0. _ _ _ _ _ A. F.

5 Digit Answer (d) EMV = 0.0 _ _ _ _ A. F.

Basic Surface

Water Impoundments



**CN 10** "SHOE BOX"

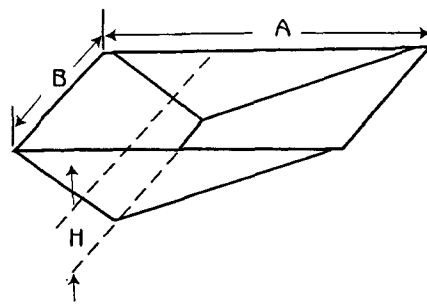
REQUIRED DIMENSIONS:

LENGTH A

WIDTH B

HEIGHT H

$$[EMV] = A \times B \times H \times [23]$$

**CN 11** "WEDGE"

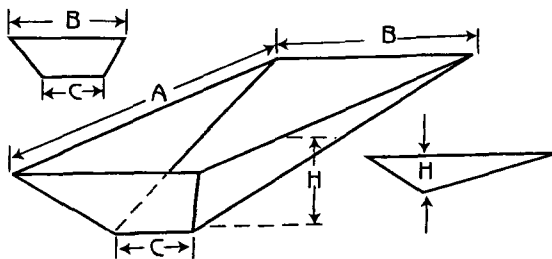
REQUIRED DIMENSIONS:

LENGTH A

WIDTH B

HEIGHT H

$$[EMV] = A \times B \times H \times [12]$$

**CN 12**

REQUIRED DIMENSIONS:

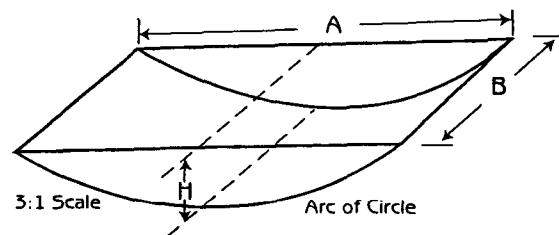
LENGTH A

WIDTH B

BOTTOM WIDTH C

HEIGHT H

$$[EMV] = (A \times H) \times [(2 \times B) + C] \times [4]$$

**CN 13**

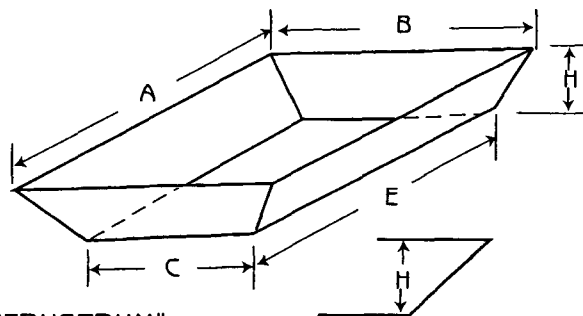
REQUIRED DIMENSIONS:

LENGTH A

WIDTH B

HEIGHT H

$$[EMV] = A \times B \times H \times [15]$$

**CN 14** "FRUSTRUM"

REQUIRED DIMENSIONS:

LENGTH (SURFACE) A WIDTH (BOTTOM) C

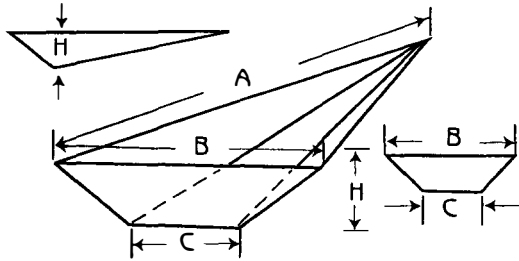
WIDTH (SURFACE) B LENGTH (BOTTOM) E

HEIGHT H

$$[EMV] = H \times [(A \times B) + (C \times E)] \times [12]$$

SECTION 2

PAGE 3

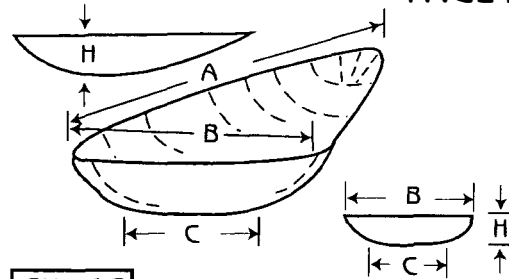


CN 15

REQUIRED DIMENSIONS:

LENGTH A
WIDTH (TOP) B
WIDTH (BOTTOM) C
HEIGHT H

$$EMV = (A \times H) \times (B + C) \times 4$$



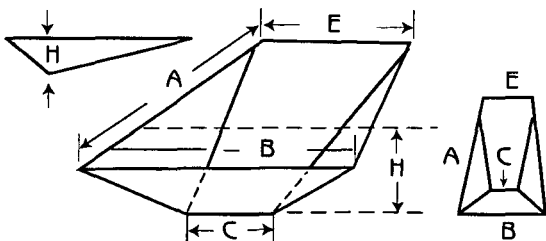
CN 16

REQUIRED DIMENSIONS:

LENGTH A
WIDTH (TOP) B
WIDTH (BOTTOM) C
HEIGHT H

$$EMV = (A \times H) \times (B + C) \times 4$$

SECTION 3

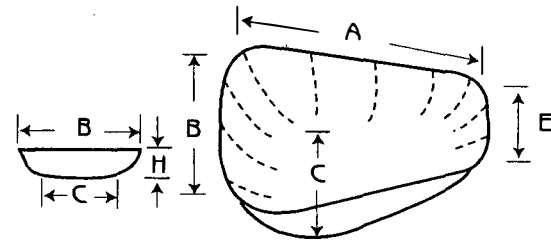


CN 17

REQUIRED DIMENSIONS:

LENGTH A
WIDTH (TOP) B
WIDTH (BOTTOM) C
WIDTH (END) E
HEIGHT H

$$EMV = (A \times H) \times (B + C + E) \times 4$$

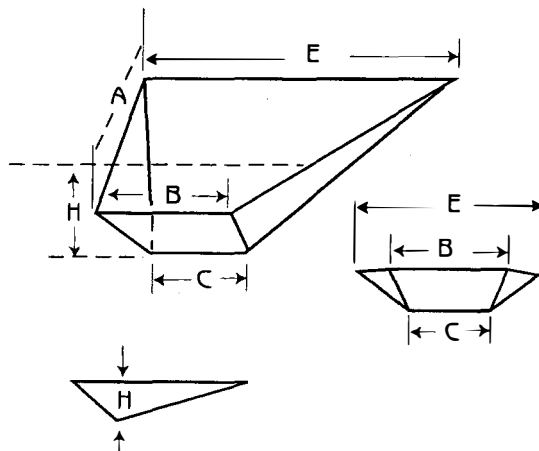


CN 18

REQUIRED DIMENSIONS:

LENGTH A
WIDTH (TOP) B
WIDTH (BOTTOM) C
WIDTH (END) E
HEIGHT H

$$EMV = (A \times H) \times (B + C + E) \times 4$$



CN 19

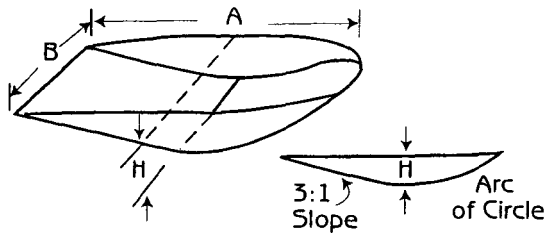
REQUIRED DIMENSIONS:

LENGTH A
WIDTH (TOP) B
WIDTH (BOTTOM) C
WIDTH (END) E
HEIGHT H

$$EMV = (A \times H) \times (B + C + E) \times 4$$

SECTION 4

PAGE 4



CN 20

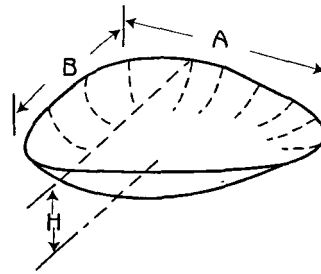
REQUIRED DIMENSIONS:

LENGTH A

WIDTH B

HEIGHT H

$$EMV = (B \times H) \times [A + (3 \times H)] \times 9$$



CN 21

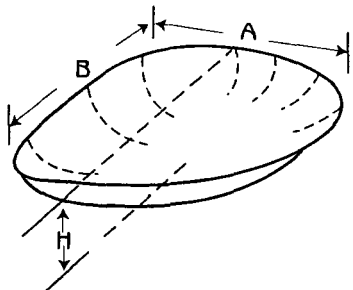
REQUIRED DIMENSIONS:

LENGTH A

WIDTH B

HEIGHT H

$$EMV = (B \times H) \times [A + (3 \times H)] \times 9$$



CN 22 SEMI - CIRCULAR

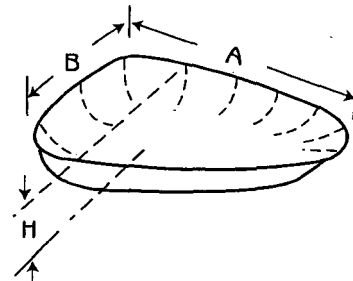
REQUIRED DIMENSIONS:

LENGTH A

WIDTH B

HEIGHT H

$$EMV = (B \times H) \times [A + (3 \times H)] \times 9$$



CN 23

REQUIRED DIMENSIONS:

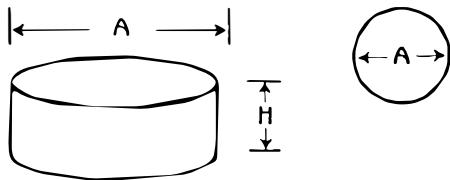
LENGTH A

WIDTH B

HEIGHT H

$$EMV = (B \times H) \times [A + (3 \times H)] \times 9$$

SECTION 5



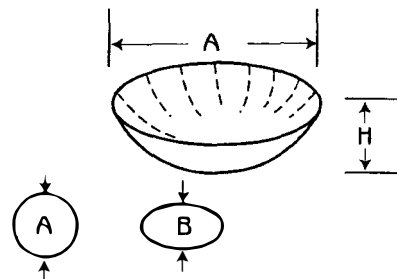
CN 24 "CYLINDER"

REQUIRED DIMENSIONS:

DIAMETER A

HEIGHT H

$$ENV = A \times A \times H \times 18$$



CN 25 "CYLINDER OR OVAL DISH"

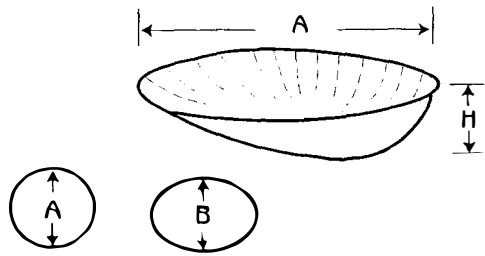
REQUIRED DIMENSIONS:

LONG AXIS DIAMETER A

SHORT AXIS DIAMETER B

HEIGHT H

$$EMV = A \times H \times 9$$



CN 26 "CAT HOLE DISH"

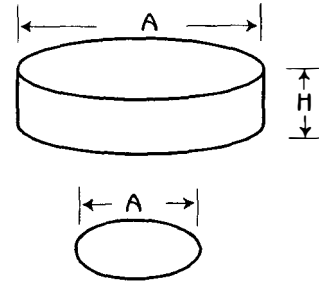
REQUIRED DIMENSIONS:

LONG AXIS DIAMETER A

SHORT AXIS DIAMETER B

HEIGHT H

$$\text{EMV} = A \times B \times H \times 10$$



CN 27 "ELLIPTICAL CYLINDER"

REQUIRED DIMENSIONS:

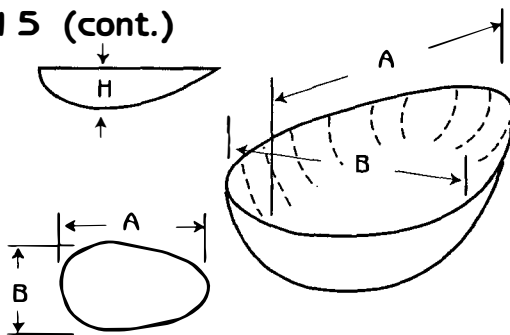
LONG AXIS DIAMETER A

SHORT AXIS DIAMETER B

HEIGHT H

$$\text{EMV} = A \times B \times H \times 18$$

SECTION 5 (cont.)



CN 28 "EGG SHAPED CAT HOLE"

REQUIRED DIMENSIONS:

LENGTH A

WIDTH B

HEIGHT H

$$\text{EMV} = A \times B \times H \times 10$$