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Captain Michael Gitt Papers - War Department, TM 1-900, Technical Manual, Mathematics for Air Crew Trainees, 2/26/1943

Extracted on Mar-28-2024 11:19:33

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6 ARMY AIR FORCES

f. In arithmetic, as in other operations, there are many tricks which often simplify the work. One such trick which is useful and easy to remember is the following: To multiply any number by 25, move over the decimal point in the given number two places to the right; then divide by 4.

Example: Multiply 16.53 by 25

Solution: Moving the decimal point over two places, 16.53 becomes 1653. Dividing this by 4: $1653/4=413.25$. Therefore $16.53 \times 25 = 413.25$

g. Exercises.—To each of the following exercises three answers have been given. Eliminate the answers which are obviously wrong by rounding off the factors and finding the approximately correct answers mentally.

$$(1) 600.3 \times 42.7 = \begin{cases} 25,632.81 \\ 1,200.62 \\ 4,273.21 \end{cases}$$

$$(2) 180 \times 76 = \begin{cases} 30,740 \\ 13,680 \\ 25,580 \end{cases}$$

$$(3) 12.45 \times 18.3 = \begin{cases} 400.785 \\ 60.785 \\ 227.835 \end{cases}$$

$$(4) 88 \times 3.2 = \begin{cases} 472.6 \\ 281.6 \\ 31.7 \end{cases}$$

$$(5) 1,751.2 \times 36.4 = \begin{cases} 63,743.68 \\ 6,374.368 \\ 12,743.68 \end{cases}$$

$$(6) 903 \times 8.475 = \begin{cases} 3,652.925 \\ 7,652.925 \\ 76.52925 \end{cases}$$

h. Exercises.—perform the indicated multiplications:

$$(1) .0734 \text{ in.} \times 70.34 \text{ in.} = ?$$

$$(2) 831.43 \times 71.46 = 59,413.9878 \quad \text{Answer.}$$

$$(3) 1.0073 \text{ in.} \times 6.4 \text{ ft} = ?$$

$$(4) 8.94 \times 9.37 = 83.7678 \quad \text{Answer.}$$

$$(5) 8,374.5 \times 9,378.46 = ?$$

$$(6) 10,742 \text{ lb} \times 737.2 \text{ ft} = 7,919,002.4 \text{ ft-lb} \quad \text{Answer.}$$

$$(7) 23.1 \times 847.4 = ?$$

$$(8) 9,034 \times 10.06 = 90,882.04 \quad \text{Answer.}$$

$$(9) 8.037 \text{ ft} \times 24.2 \text{ lb} = ?$$

$$(10) .0074 \times 371.5 = 2.7491 \quad \text{Answer.}$$

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