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4) A furniture company produces  $5.2 \times 10^4$  chairs each year. How many chairs does the company produce every 8 year?

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$$11 - 8 = 3$$

$$d = r \cdot t$$

$$\frac{1.5 \times 10^{11}}{3 \times 10^8} = \frac{3 \times 10^8}{3 \times 10^8} t$$

$$0.5 \times 10^3 = t$$

$$5 \times 10^2 \text{ s}$$

$$\begin{array}{r} 3 \overline{) 1.5} \\ \underline{-15} \\ 0 \end{array}$$

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$$8(5.2 \times 10^4)$$

$$41.6 \times 10^4$$

$$4.16 \times 10^5 \text{ chairs}$$

$$\begin{array}{r} 5.2 \\ \times 8 \\ \hline 41.6 \end{array}$$

Powers of numbers in scientific notation

$$(3 \times 10^8)^2 = 9 \times 10^{16}$$
$$(3 \times 10^8)^2 = (3 \times 10^8)(3 \times 10^8)$$
$$9 \times 10^{16}$$

$$(3a^8)^2 = 9a^{16}$$

$$(5 \times 10^7)^2 = 25 \times 10^{14}$$

$$2.5 \times 10^{15}$$

$$(3 \times 10^{-11})^3 = 27 \times 10^{-33}$$

$$2.7 \times 10^{-32}$$

$6e7$

$6 \times 10^7$