

TE du 15 novembre

72 minutes

- Problèmes (selon liste tablette du 15 septembre)
- Calcul littéral (selon tablette du 27 septembre)
- Formules (4.1 à 4.15)

$$F = G \cdot \frac{m \cdot M}{d^2}$$

$$12 = 3 \cdot 4$$

$$4 =$$

$$F = G \cdot X$$

$$\frac{F}{G} = X = \frac{m \cdot M}{d^2}$$

$$\textcircled{4} = \frac{\boxed{12}}{\textcircled{3}}$$

$$\textcircled{\frac{F}{G}} = \frac{\boxed{\phantom{X}}}{\textcircled{d^2}}$$

$$\frac{F}{G} \cdot d^2 = m \cdot M$$

$$\frac{F}{M \cdot G} \cdot d^2 = m$$

$$d = \frac{1}{2} \cdot g \cdot t^2 + v_0 \cdot t$$

Diagram showing the derivation of the distance equation. The first term,  $\frac{1}{2} \cdot g \cdot t^2$ , is enclosed in a green box with a circled '2' above it. Red arrows point from the '2' to the denominator '2', from 'g' to the multiplication dot, and from 't' to the exponent '2'. A green plus sign is between the two terms. The second term,  $v_0 \cdot t$ , is enclosed in a green box with a yellow highlight under  $v_0$ . Red arrows point from the '1' to the multiplication dot and from 't' to the variable 't'.

but:  $v_0 = ?$

$$d - \frac{1}{2} g t^2 = v_0 \cdot t$$

Diagram showing the rearrangement of the equation. The left side,  $d - \frac{1}{2} g t^2$ , is enclosed in a black box. A red arrow points from the  $v_0$  in the right-hand term  $v_0 \cdot t$  to the  $v_0$  in the equation.

$$\frac{d - \frac{1}{2} g t^2}{t} = v_0 = \frac{d}{t} - \frac{1}{2} g t$$

Diagram showing the final derivation of the initial velocity. The left side of the equation,  $d - \frac{1}{2} g t^2$ , is circled in green. A horizontal line is drawn under this expression, and a green arrow points from the line down to the variable 't' below it, indicating division. The right side of the equation is  $v_0 = \frac{d}{t} - \frac{1}{2} g t$ .

$$A = 1 \cdot \frac{b + b}{2} \cdot h$$

$$A = X \cdot h$$

$$h = \frac{A}{X} = \frac{A}{\left(\frac{b+b}{2}\right)}$$

$$\begin{array}{c} \uparrow \\ \uparrow \\ \uparrow \\ \textcircled{12} = 3 \cdot 4 \end{array}$$

$$4 = \frac{\textcircled{12}}{3}$$

$$V = \frac{1}{3} \cdot \pi \cdot r^2 h$$

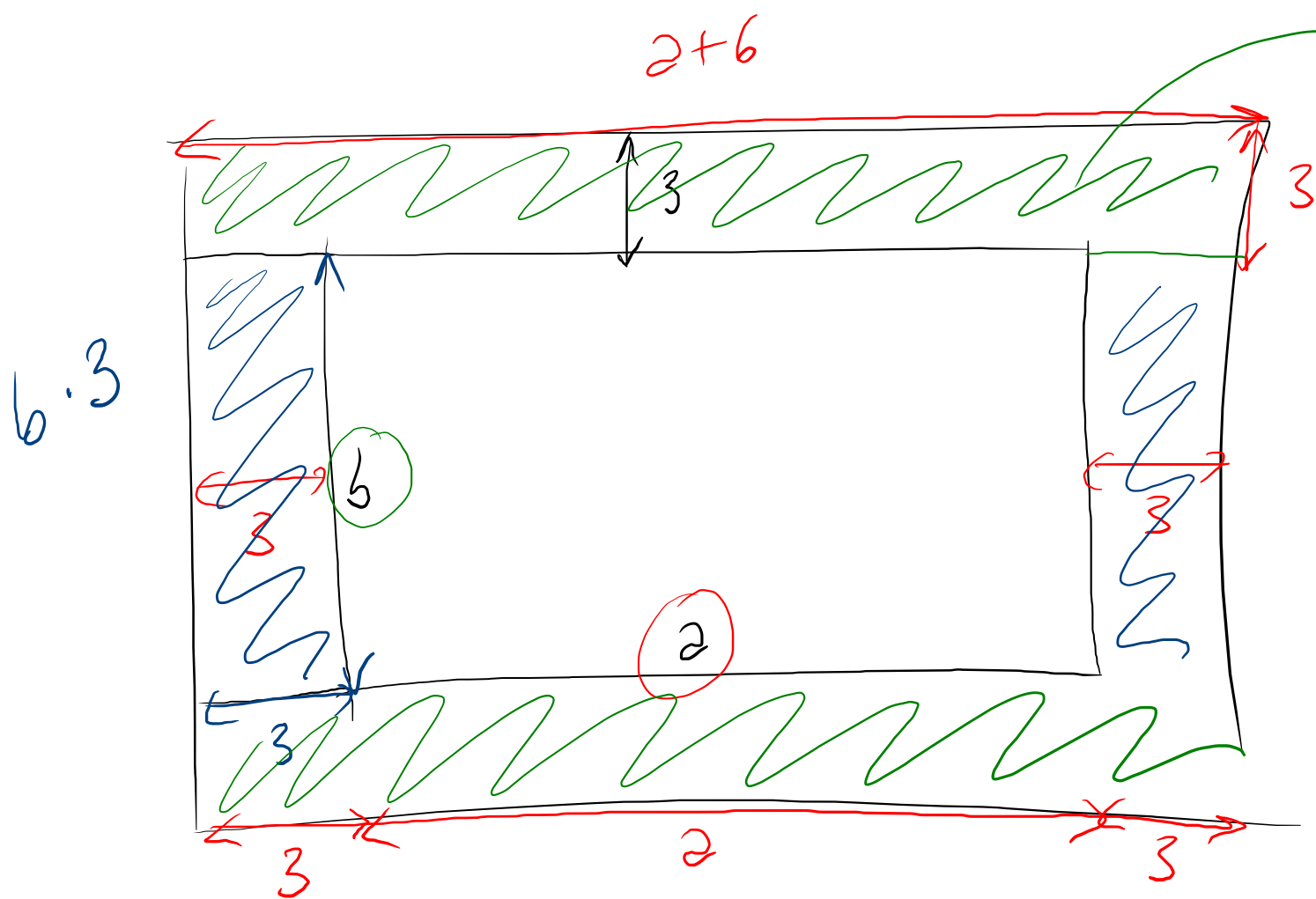
$$\div \left(\frac{1}{3}\right)$$

$$\frac{V}{\left(\frac{1}{3}\right)} = \pi r^2 h$$

$$\frac{1}{\left(\frac{1}{3}\right)} = \frac{3}{1}$$

$$\frac{3}{1} \cdot V = \pi r^2 h$$

$$3V = \pi r^2 h$$



$$(2+6) \cdot 3$$

$$\begin{cases} 216 = 2(2+6) \cdot 3 + 2 \cdot 6 \cdot 3 \\ a = b+6 \end{cases}$$

$$2+3+3 = \boxed{2+6}$$

$$\boxed{a = b + 6}$$

$\uparrow$                      $\uparrow$   
 longueur            largeur

$$V = \left(\frac{1}{3}\right) \cdot \pi \cdot r^2 \cdot h$$

$\div \left(\frac{1}{3}\right)$

$$\frac{V}{\frac{1}{3}} = \pi r^2 h$$

$$3V = \pi r^2 h$$

$$h = ?$$

$$\frac{1}{\left(\frac{1}{3}\right)} = \frac{3}{1}$$

$$\frac{1}{\left(\frac{2}{6}\right)} = \frac{6}{2}$$