

Blood Spatter - Angle of Impact

- Calculating the angle of impact

- (1) measure the width of drop at its widest point. (w)
- (2) measure the length of drop, do NOT include the tail. (l)
- (3) use this equation to calculate the angle, α



$$\alpha = \sin^{-1} \left(\frac{w}{l} \right)$$

(Ex)

$$w = .8\text{cm}$$
$$l = 2.1\text{cm}$$

$$\alpha = \sin^{-1} \left(\frac{.8}{2.1} \right)$$

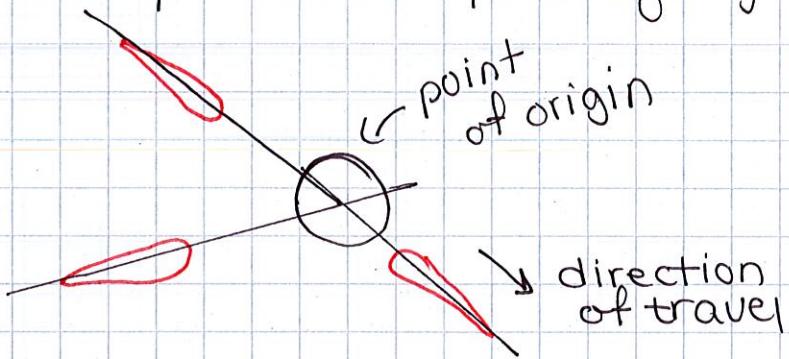
$$\alpha = 22.4^\circ$$

R.
ht. of
ht. above
origin
ground

Point of Origin - Blood Spatter

To find where the blood spatter originated from:

- (1) draw lines through the blood drops & extend them out to where they overlap. This is the point of origin

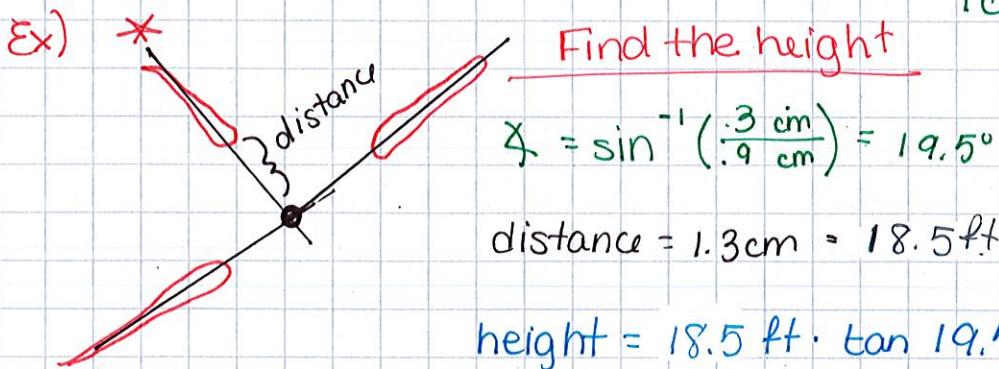


Height Blood Fell From?

Steps

- (1) Find the point of origin
- (2) Find the angle of impact $\gamma = \sin^{-1}(\frac{w}{d})$
- (3) measure the distance from the head of a blood drop to the point of origin.
- (4) use this equation to solve for height:

$$\text{height} = \text{distance} \cdot \tan \gamma$$



$$\text{height} = 18.5 \text{ ft} \cdot \tan 19.5^\circ = 6.6 \text{ ft}$$