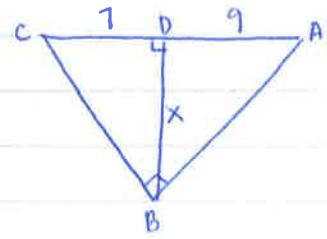
What Do They call Bowling In Hawaii?

① 

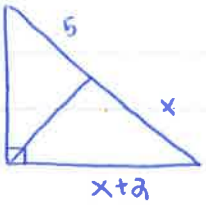
$\frac{7}{x} = \frac{x}{9}$

$x^2 = 63$

$x = \sqrt{9}\sqrt{7}$

$x = 3\sqrt{7}$

$\boxed{BD = 3\sqrt{7}}$

② 

$\frac{x}{x+2} = \frac{x+2}{5+x}$

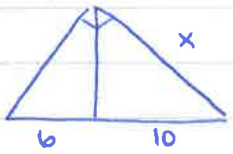
$(x+2)(x+2) = x(5+x)$

$x^2 + 4x + 4 = 5x + x^2$

$-x^2 \qquad -x^2$

$4x + 4 = 5x$

$\boxed{4 = x}$

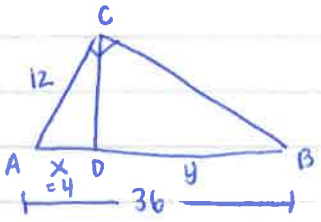
③ 

$\frac{10}{x} = \frac{x}{16}$

$x^2 = 160$

$x = \sqrt{16}\sqrt{10}$

$\boxed{x = 4\sqrt{10}}$

④ 

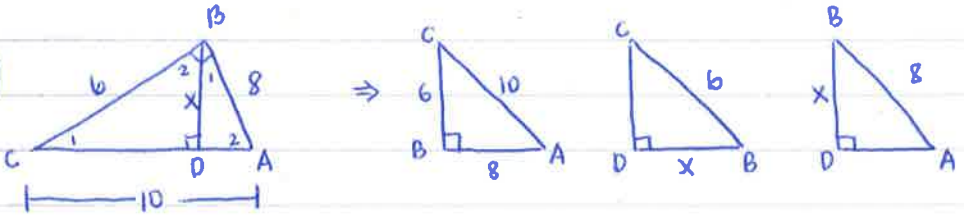
$\frac{x}{12} = \frac{12}{36}$

$144 = 36x$

$x = 4$

$DB = 36 - 4$

$\boxed{DB = 32}$

⑤ 

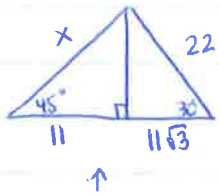
$\frac{CB}{BD} = \frac{CA}{BA} \Rightarrow \frac{6}{x} = \frac{10}{8}$

$10x = 48$

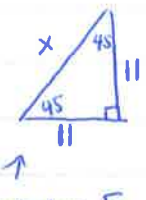
$x = \frac{48}{10} = \frac{24}{5}$

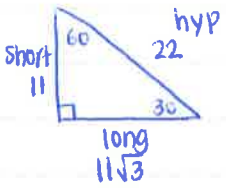
$\boxed{BD = \frac{24}{5}}$

⑥



$\Rightarrow$





$y = 11 + 11\sqrt{3}$

hyp = leg · √2

$x = 11\sqrt{2}$

hyp = short · 2

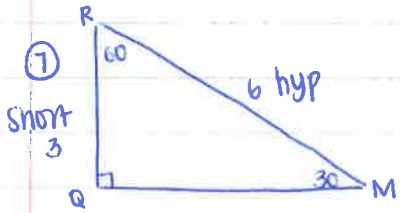
$\frac{22}{2} = \frac{\text{short} \cdot 2}{2}$

short = 11

long = short · √3

long = $11\sqrt{3}$

⑦



long = $3\sqrt{3}$

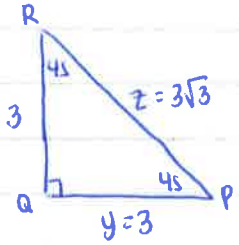
hyp = short · 2

6 = short · 2

short = 3

long = short · √3

long = $3\sqrt{3}$



hyp = leg · √3

$z = 3\sqrt{3}$

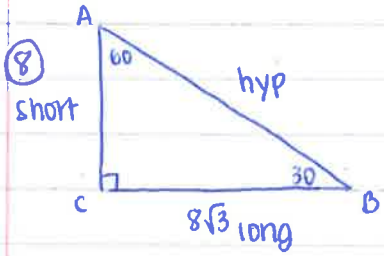
$y = 3$

MQ = x + y

$3\sqrt{3} = x + 3$

$x = 3\sqrt{3} - 3$

⑧



long = short · √3

$BC = AC\sqrt{3}$

$\frac{8\sqrt{3}}{\sqrt{3}} = \frac{AC\sqrt{3}}{\sqrt{3}}$

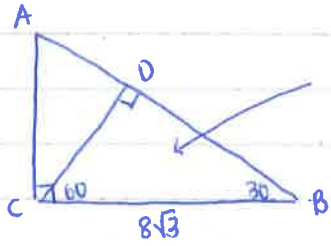
$AC = 8$

hyp = short · 2

AB = AC · 2

AB = 8 · 2

$AB = 16$



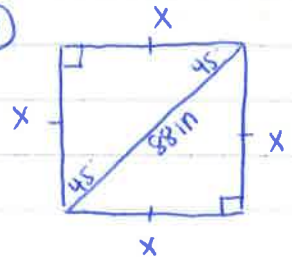
hyp = short · 2

CB = CD · 2

$\frac{8\sqrt{3}}{2} = \frac{CD \cdot 2}{2}$

$CD = 4\sqrt{3}$

⑨



hyp = leg · √2

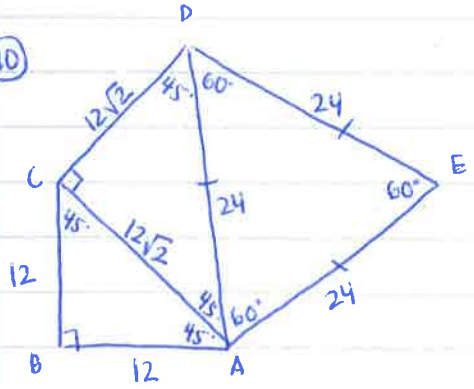
$\frac{88}{\sqrt{2}} = \frac{x\sqrt{2}}{\sqrt{2}}$

$x = \frac{88 \cdot \sqrt{2}}{\sqrt{2} \cdot \sqrt{2}} = \frac{88\sqrt{2}}{2} = 44\sqrt{2}$

$P = 4(44\sqrt{2})$

$P = 176\sqrt{2}$ in

(10)



$AD = \text{leg} \cdot \sqrt{3}$

$AD = 12\sqrt{2} \cdot \sqrt{2}$

$AD = 12\sqrt{4}$

$AD = 12(2)$

$AD = 24$

$P = 12 + 12 + 24 + 24 + 12\sqrt{3}$

$\boxed{P = 72 + 12\sqrt{3}}$

Answer: ROLLING IN THE ISLES

Why was the Pail Pale?

① $\frac{5}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} = \frac{5\sqrt{3}}{\sqrt{9}} = \boxed{\frac{5\sqrt{3}}{3}}$

② $\frac{2}{\sqrt{7}} \cdot \frac{\sqrt{7}}{\sqrt{7}} = \frac{2\sqrt{7}}{\sqrt{49}} = \boxed{\frac{2\sqrt{7}}{7}}$

③ $\frac{20}{\sqrt{6}} \cdot \frac{\sqrt{5}}{\sqrt{5}} = \frac{20\sqrt{5}}{\sqrt{25}} = \frac{20\sqrt{5}}{5} = \boxed{4\sqrt{5}}$

④ $\frac{14}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \frac{14\sqrt{2}}{\sqrt{4}} = \frac{14\sqrt{2}}{2} = \boxed{7\sqrt{2}}$

⑤ $\frac{4}{\sqrt{10}} \cdot \frac{\sqrt{10}}{\sqrt{10}} = \frac{4\sqrt{10}}{\sqrt{100}} = \frac{4\sqrt{10}}{10} = \boxed{\frac{2\sqrt{10}}{5}}$

⑥ $\frac{3}{\sqrt{12}} \cdot \frac{\sqrt{12}}{\sqrt{12}} = \frac{3\sqrt{12}}{\sqrt{144}} = \frac{3\sqrt{12}}{12} = \frac{3\sqrt{4}\sqrt{3}}{12} = \frac{3 \cdot 2\sqrt{3}}{12} = \frac{6\sqrt{3}}{12} = \boxed{\frac{\sqrt{3}}{2}}$

⑦ $\frac{30}{\sqrt{18}} \cdot \frac{\sqrt{18}}{\sqrt{18}} = \frac{30\sqrt{18}}{\sqrt{324}} = \frac{30\sqrt{18}}{18} = \frac{30\sqrt{9}\sqrt{2}}{18} = \frac{30 \cdot 3\sqrt{2}}{18} = \frac{90\sqrt{2}}{18} = \boxed{5\sqrt{2}}$

⑧ $\frac{8}{\sqrt{20}} \cdot \frac{\sqrt{20}}{\sqrt{20}} = \frac{8\sqrt{20}}{\sqrt{400}} = \frac{8\sqrt{20}}{20} = \frac{8\sqrt{4}\sqrt{5}}{20} = \frac{8 \cdot 2\sqrt{5}}{20} = \frac{16\sqrt{5}}{20} = \boxed{\frac{4\sqrt{5}}{5}}$

⑨ $\frac{9}{2\sqrt{45}} \cdot \frac{\sqrt{45}}{\sqrt{45}} = \frac{9\sqrt{45}}{2\sqrt{2025}} = \frac{9\sqrt{45}}{2(45)} = \frac{9\sqrt{45}}{90} = \frac{9\sqrt{9}\sqrt{5}}{90} = \frac{9 \cdot 3\sqrt{5}}{90} = \frac{27\sqrt{5}}{90} = \boxed{\frac{3\sqrt{5}}{10}}$

⑩ $\frac{\sqrt{7}}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} = \frac{\sqrt{21}}{\sqrt{9}} = \boxed{\frac{\sqrt{21}}{3}}$

⑪ $\frac{3\sqrt{6}}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \frac{3\sqrt{12}}{\sqrt{4}} = \frac{3\sqrt{12}}{2} = \frac{3\sqrt{4}\sqrt{3}}{2} = \frac{3 \cdot 2\sqrt{3}}{2} = \frac{6\sqrt{3}}{2} = \boxed{3\sqrt{3}}$

⑫ $\frac{2\sqrt{3}}{\sqrt{15}} \cdot \frac{\sqrt{15}}{\sqrt{15}} = \frac{2\sqrt{45}}{\sqrt{225}} = \frac{2\sqrt{45}}{15} = \frac{2\sqrt{9}\sqrt{5}}{15} = \frac{2 \cdot 3\sqrt{5}}{15} = \frac{6\sqrt{5}}{15} = \boxed{\frac{2\sqrt{5}}{5}}$

Answer: IT WASN'T A WELL BUCKET