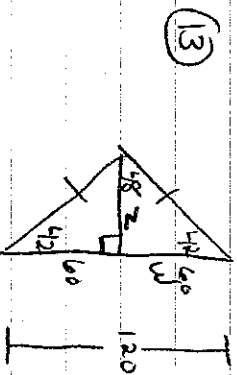


8.5

9) $\tan y = \frac{a}{a/n}$
 $\tan y = 0.5$
 $y = 27^\circ$

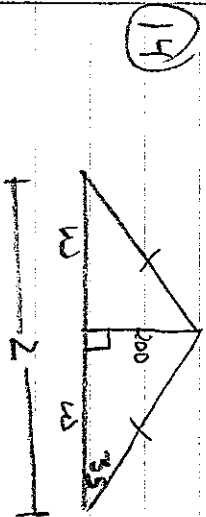
11) $a^2 + b^2 = \sqrt{3}y^2$ $\tan y = \frac{3}{5}$
 $b^2 = 25$
 $b = 5$
 $y \approx 31^\circ$

12) $a^2 + b^2 = \sqrt{13}^2$ $\tan y = \frac{3}{2}$
 $b^2 = 9$
 $b = 3$
 $y \approx 56^\circ$

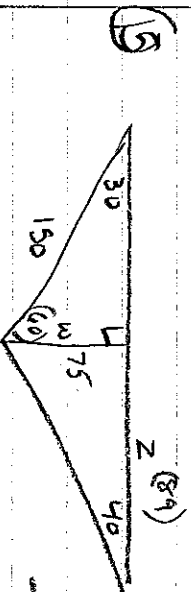


$w = 60$

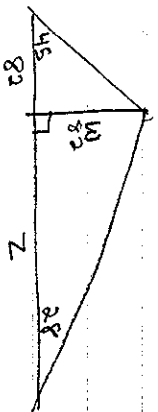
$\tan 48 = \frac{w}{z}$
 $1.11 = \frac{60}{z}$
 $54 \approx z$



$\tan 35 = \frac{200}{w}$
 $0.7 = \frac{200}{w}$
 $286.7 = w$
 $571.4 = z$

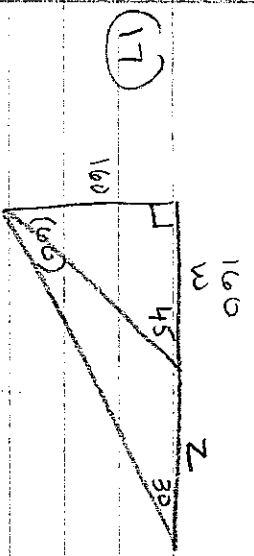


15) $w = \frac{150}{2} = 75$
 $\tan 40 = \frac{75}{z}$
 $0.839 = \frac{75}{z}$
 $89 \approx z$



$w = 82$

$\tan 28 = \frac{82}{z}$
 $0.532 \approx \frac{82}{z}$
 $154 \approx z$



$$\boxed{w = 160}$$

$$\tan 30 = \frac{160}{w}$$

$$0.577 \approx \frac{160}{100+z}$$

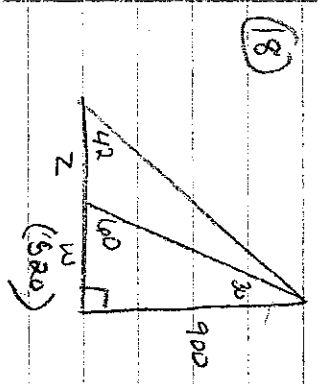
$$92.32 + 0.577z = 160$$

$$\boxed{z \approx 117}$$

OR

$$160 + z = \sqrt{3} (160)$$

$$z \approx 117$$



$$900 = \sqrt{3} w + 1$$

$$\frac{900}{\sqrt{3}} = w + 1$$

$$\frac{900\sqrt{3}}{3} = w + 1$$

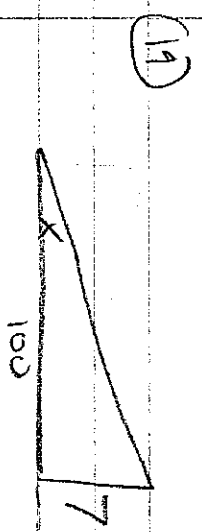
$$300\sqrt{3} = w + 580$$

$$\tan 42 \approx \frac{900}{580+z}$$

$$0.9(580+z) = 900$$

$$468 + 0.9z = 900$$

$$\boxed{z \approx 480}$$

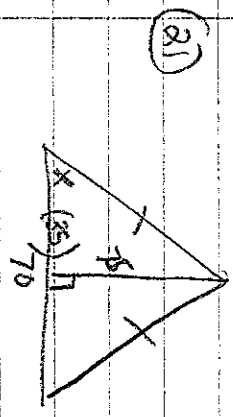


$$\tan x = \frac{7}{100} = 0.07$$

$$\boxed{x \approx 4^\circ}$$



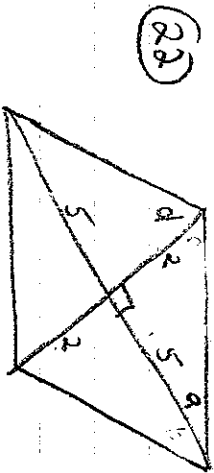
$$\tan 8 \approx 14 = \left(\frac{\text{rise}}{\text{run}}\right) = \boxed{14\%}$$



$$\tan x = \frac{75}{35}$$

$$\tan x \approx 2.14$$

$$\boxed{x \approx 65^\circ}$$



(22)

$$\tan a = \frac{2}{5}$$

$$a \approx 22$$

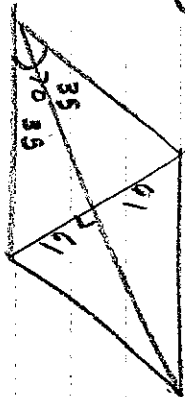
$$22 + 22 = \boxed{44^\circ}$$

$$\tan d \approx \frac{5}{2}$$

$$d \approx 68$$

$$68 + 22 = \boxed{136^\circ}$$

(23)



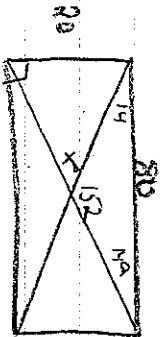
$$\tan 35 = \frac{41}{x}$$

$$0.7 \approx \frac{41}{x}$$

$$87 \approx x$$

$$87 + 2 = \boxed{174}$$

(24)



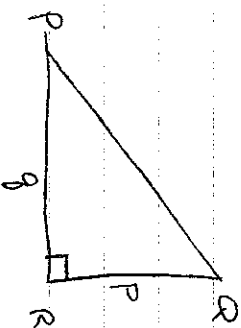
$$\tan a = \frac{80}{14}$$

$$a \approx 14$$

$$\boxed{x \approx 28^\circ}$$

$$(180 - 152)$$

(26) a) Given: ΔPQR ; $\angle R$ is rt. \angle
 Prove: $\tan P \cdot \tan Q = 1$



~~3~~

1. ΔPQR ; $\angle R$ is rt. \angle
2. $\tan P = \frac{p}{q}$; $\tan Q = \frac{q}{p}$
3. $\frac{p}{q} \cdot \frac{q}{p} = 1$
4. $\tan P \cdot \tan Q = 1$

1. Given
2. def tangent
3. Algebra

b) $\tan 32 = \frac{5}{8}$ $\tan 58 = ?$

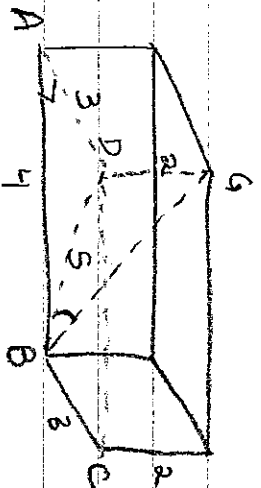
$$(32 + 58 = 90)$$

(pair of tan of
 Compl. \angle 's = 1)

$$\frac{5}{8} \cdot x = 1$$

$$\boxed{x = \frac{8}{5}}$$

27



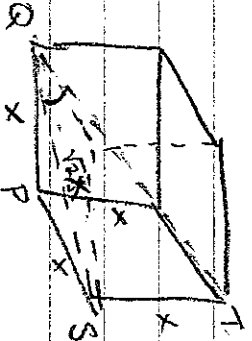
a) $4^2 + 3^2 = BD^2$

$BD = BD^2$
 $5 = BD$

b) $\tan \angle GBD = \frac{2}{5}$

$m\angle GBD \approx 22^\circ$

28



$x^2 + x^2 = QS^2$

$2x^2 = QS^2$

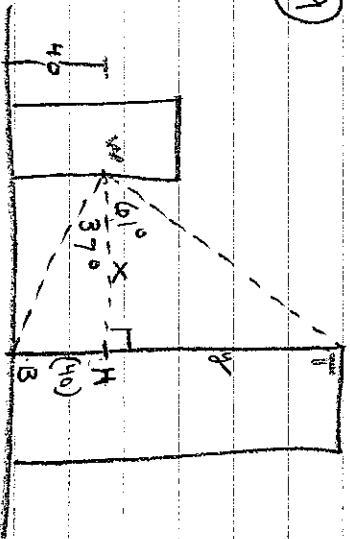
$\sqrt{2}x = QS$

$\tan \angle TQS = \frac{x}{\sqrt{2}x}$

$\tan \angle TQS = \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2}$

$m\angle TQS \approx 35^\circ$

29



Find BT

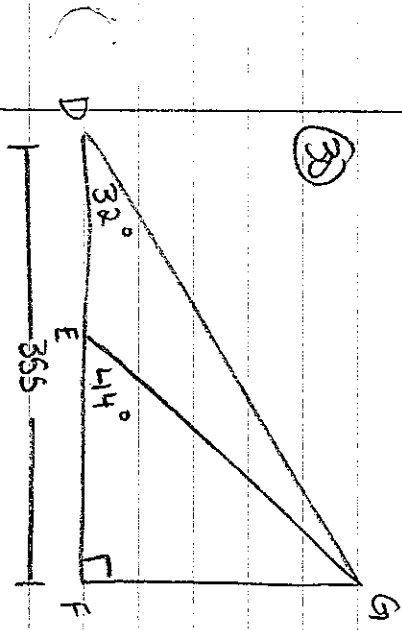
$$\tan 37 = \frac{40}{x} \quad \tan 61 = \frac{40}{53.1}$$

$$1.7536 = \frac{40}{x} \quad 95.8 = y$$

$$53.1 = x$$

$$95.8 + 40 = \boxed{135.8 \text{ ft}}$$

30



Find EF

$$\tan 32 = \frac{GF}{355}$$

$$\tan 44 = \frac{222}{EF}$$

$$222 = GF$$

$$\boxed{230 = EF}$$

