

(7.6)

(3) $\frac{4}{6} = \frac{5}{x}$

$30 = 4x$
 $7.5 = x$

(4) $\frac{21}{12} = \frac{x}{20}$

$420 = 12x$
 $35 = x$

(5) $\frac{15}{39} = \frac{10}{x}$

$390 = 15x$
 $26 = x$

(6) $\frac{8}{14} = \frac{x}{21}$

$168 = 14x$
 $12 = x$

(7) $\frac{42-x}{36} = \frac{x}{27}$

$36x = 1134 - 27x$
 $63x = 1134$
 $x = 18$

(8) $\frac{15}{18} = \frac{25}{x}$

$15x = 450$
 $x = 30$

(9) $\frac{22}{11} = \frac{29}{x}$

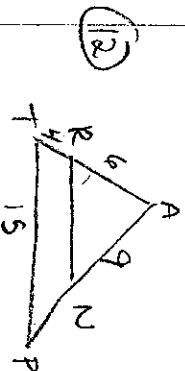
$22x = 319$
 $x = 14.5$

(10) $\frac{9}{18} = \frac{x}{24-x}$

$18x = 216 - 9x$
 $27x = 216$
 $x = 8$

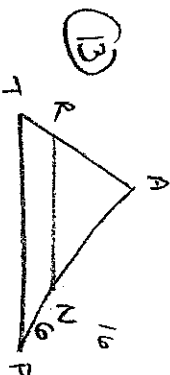
(11) $\frac{4x}{3x} = \frac{5x}{15}$

$60 = 15x$
 $4 = x$



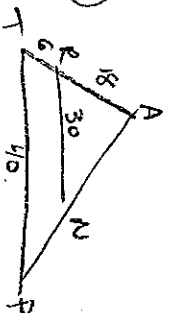
AT = 10
NP = 6
AP = 15
RN = 9

$\frac{6}{4} = \frac{9}{NP}$
 $\frac{6}{10} = \frac{RN}{15}$



AN = 10

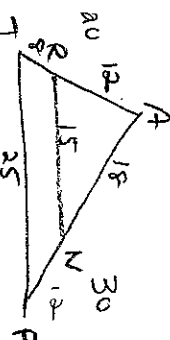
(14)



RT = 6
AT = 24

$\frac{18}{18+RT} = \frac{30}{40}$
 $720 = 540 + 30RT$

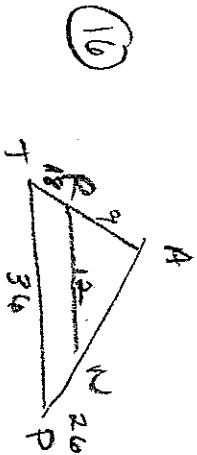
(15)



RT = 8
TP = 25
AN = 18
NP = 12

$\frac{12}{20} = \frac{15}{TP}$
 $360 = 12TP$

$\frac{12}{20} = \frac{AN}{30}$
 $360 = 20AN$



$$\frac{12}{36} = \frac{AT}{AT+18}$$

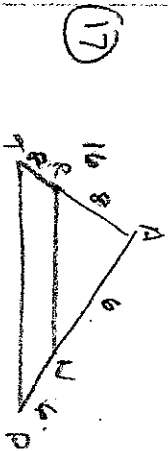
$$\frac{12}{36} = \frac{AN}{AN+24}$$

$$AR = 9$$

$$AT = 27$$

$$AN = 18$$

$$AP = 39$$

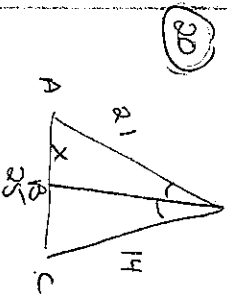


$$\frac{8}{8} = \frac{6}{6}$$

$$AR = 8$$

$$NP = 6$$

$$AP = 12$$

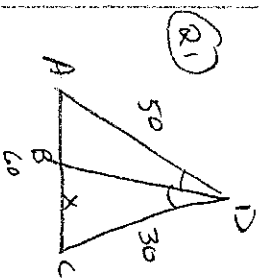


$$\frac{X}{21} = \frac{25-X}{14}$$

$$\text{OR } \frac{X}{25} = \frac{21}{35}$$

$$14X = 525 - 21X$$

$$\boxed{X = 15}$$



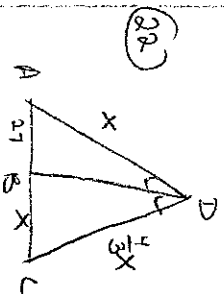
$$\frac{30}{60-X} = \frac{30}{X}$$

$$\text{OR } \frac{X}{60} = \frac{30}{50}$$

$$50X = 1800 - 30X$$

$$1800 = 80X$$

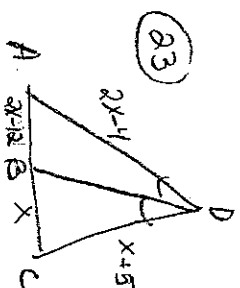
$$\boxed{X = 22.5}$$



$$\frac{X}{27} = \frac{7/3 X}{14X}$$

$$X = 30$$

$$27 + 30 = \boxed{63 = AC}$$



$$\frac{2x-4}{2x-12} = \frac{x+5}{X}$$

$$X(2x-4) = (2x-12)(x+5)$$

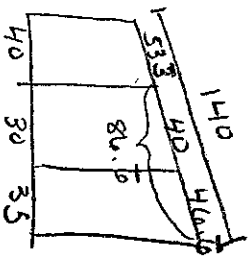
$$2x^2 - 4x = 2x^2 - 2x - 60$$

$$60 = 2x$$

$$30 = x$$

$$AC = 2(30) - 12 + 30$$

$$\boxed{AC = 78}$$



Q24

$$\frac{40}{65} = \frac{X}{140 - X}$$

$$\frac{30}{30} = \frac{X}{86.5 - X}$$

$$65X = 5600 - 40X$$

$$35X = 2600 - 30X$$

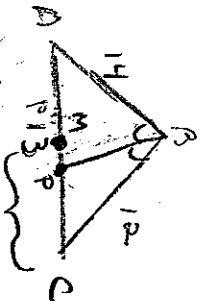
$$105X = 5600$$

$$65X = 2600$$

$$X = 53.3$$

$$X = 40$$

Q25



$$\frac{AP}{13} = \frac{14}{26}$$

$$AP = 7$$

$$MD - AP = 0.5$$

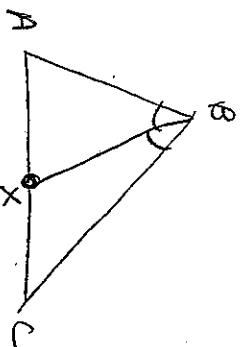
$$MD = 6.5$$

$$MP = 0.5$$

Q26

Given: \overline{BX} bisects $\angle B$
 X is the midpt. of \overline{AC}

Prove: $\triangle ABC$ is isosc.



1. X is the midpt. of \overline{AC}

\overline{BX} bisects $\angle B$

1. Given

2. $\overline{AX} \cong \overline{XC}$

2. def. midpt.

3. $\angle AX = \angle XC$

3. def. \cong

4. $\frac{AB}{AX} = \frac{BC}{XC}$

4. \angle bis. thm.

5. $\frac{AB}{AX} = \frac{BC}{AX}$

5. subst.

6. $\overline{AB} = \overline{BC}$

6. mult. prop. =

7. $\overline{AB} \cong \overline{BC}$

7. def. \cong

8. $\triangle ABC$ is isosc.

8. def. isosc.

