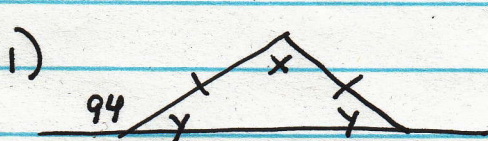
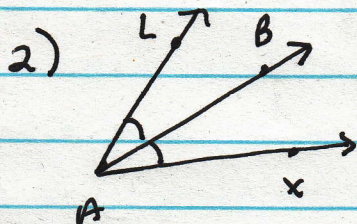


Exam Review Key



$$y = 86^\circ$$

$$x = 8^\circ$$



$$\frac{96}{2} = 48^\circ$$

3) Transitive

4) False: $\triangle ABE \cong \triangle CBD$
↑
order

5) False, always \cong

6) True

7) $AB + BC = AC$

$$x + 16 + 5x + 10 = 56$$

$$6x + 26 = 56$$

$$6x = 30$$

$$x = 5$$

$$AB = x + 16$$

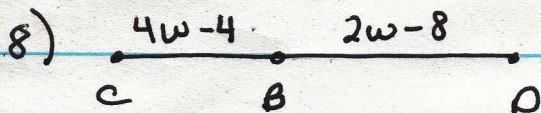
$$= 5 + 16$$

$$= 21$$

$$BC = 5x + 10$$

$$= 5(5) + 10$$

$$= 35$$



$$CD = 4w - 4 + 2w - 8$$

$$= 6w - 12$$

$$= 6(24) - 12 = 132$$

9) $3x - 2y = 8$

$$-2y = -3x + 8$$

$$y = \frac{3}{2}x - 4$$

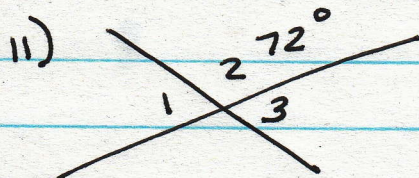
slope = $\frac{3}{2}$

10) $x^2 + 12^2 = 13^2$

$$x^2 + 144 = 169$$

$$x^2 = 25$$

$$x = 5$$



$$m\angle 3 = 108^\circ$$

12) $\angle C$, $\angle DCE$, $\angle ECD$

13) L is the midpoint of \overline{KM}

$$\overleftrightarrow{AB} \perp \overline{KM}$$

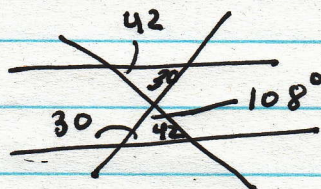
$$\overline{AK} \cong \overline{AM}$$

$$\overline{BK} \cong \overline{BM}$$

$\angle ALM$, $\angle BLM$, $\angle BLK$ + $\angle ALK$ are all 90°

14) Centroid.

15)



$$x = 72$$

16) $m\angle 6 = 125^\circ$

17) HL or SAS

18) AAS

19) ASA

$$20) 3x - 49 + 2x + x + 31 = 180$$

$$6x - 18 = 180$$

$$6x = 198$$

$$x = 33$$

$$3x - 49$$

$$3(33) - 49 = 50^\circ$$

$$2x$$

$$2(33) = 66^\circ$$

$$x + 31$$

$$33 + 31 = 64^\circ$$

\angle s are 50° , 66° + 64°

$$21) 3x = x + 20$$

$$2x = 20$$

$$x = 10$$

$$22) x - 3 = 21$$

$$x = 24$$

$$23) 3x = 5x - 12$$

$$-2x = -12$$

$$x = 6$$

$$24) 5x = 3x + 24$$

$$2x = 24$$

$$x = 12$$

$$25) 5x = 35$$

$$x = 7$$

$$26) 4x - 15 = x + 30$$

$$3x = 45$$

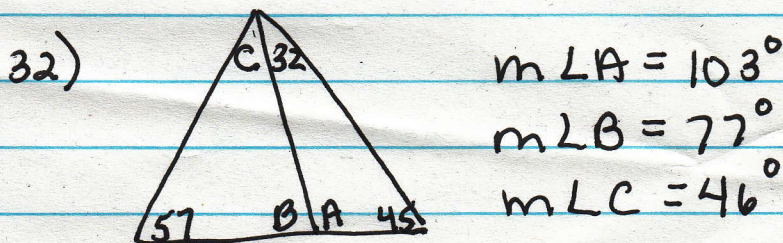
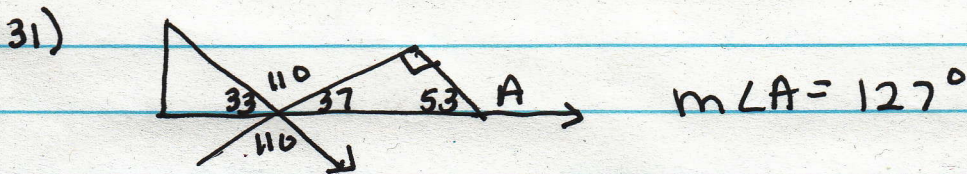
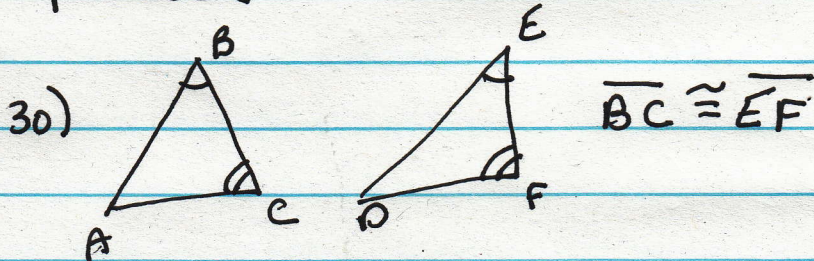
$$x = 15$$

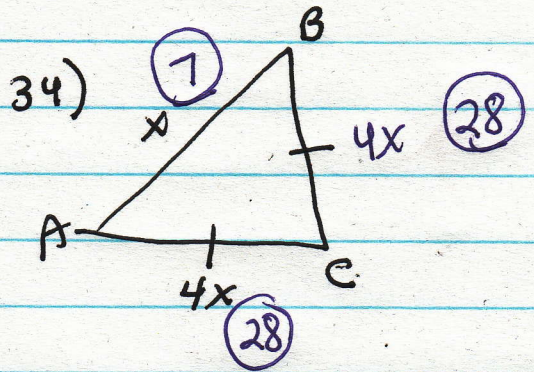
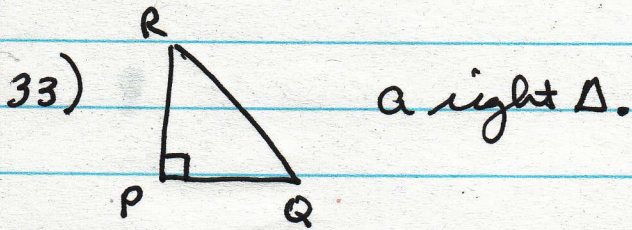
$$27) \begin{array}{c} \triangle \\ \text{left side: } 14 \\ \text{right side: } 10 \\ \text{bottom side: } x \end{array} \quad 4 < x < 24 \quad 28)$$

$$29) m_1 = \frac{9-7}{13-10} = \frac{2}{3}$$

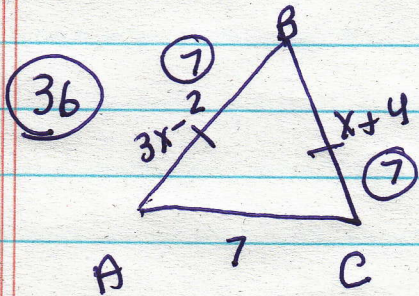
$$m_2 = \frac{5-3}{-1+4} = \frac{2}{3}$$

parallel





35) ΔKHF



$$\begin{aligned} 3x-2 &= x+4 \\ 2x &= 6 \\ x &= 3 \end{aligned}$$

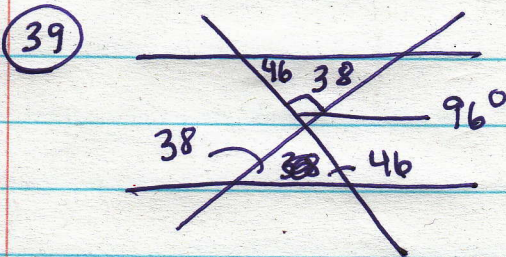
$AC = BC = AB = 7$
equilateral Δ

$$\begin{aligned} 4x + 4x + x &= 63 \\ 9x &= 63 \\ x &= 7 \end{aligned}$$

$$AB = 7, BC = AC = 28$$

37) $\Delta WXZ \cong \Delta WYZ$
SSS

38) No the angle is not included between the sides



$$46 + 38 = 84$$

96°

40) \perp to $m = -\frac{4}{3}$ is $\frac{3}{4}$ (5, -4)

$$\begin{aligned} y - y_1 &= m(x - x_1) \\ y + 4 &= \frac{3}{4}(x - 5) \\ y + 4 &= \frac{3}{4}x - \frac{15}{4} \\ &= \frac{3x - 15}{4} \end{aligned}$$

$$y = \frac{3}{4}x - \frac{31}{4}$$

$$41) x+2+2x-1 > 3x$$

$$3x+1 > 3x$$

time no matter what
doesn't help

$$2x-1+3x > x+2$$

$$5x-1 > x+2$$

$$4x-1 > 2$$

$$4x > 3$$

$$x > \frac{3}{4}$$

$$2x-1+3x$$

$$3x+x+2 > 2x-1$$

$$4x+2 > 2x-1$$

$$2x > -3$$

$$x > -\frac{3}{2}$$

doesn't help because x already has to be $> \frac{3}{4}$

so ~~$x > \frac{3}{4}$~~ $x > \frac{3}{4}$

$$(42) 6 < x < 20$$

$$(43) 3x+137+2x+28=180$$

$$5x+165=180$$

$$5x=15$$

$$x=3$$

$$(44) a=19 \text{ ft}$$

$$b=4 \text{ ft}$$

$$c = \sqrt{377}$$

$$d = 56^\circ$$

$$e = 90^\circ$$

$$f = 34^\circ$$

(45) F) Equiangular

$$(46) \triangle ABC \cong \triangle EDC$$

$$(47) \overline{AD}, \overline{EH}, \overline{EF}, \overline{AB}$$

$$(48) \quad 5x+6 = 2(3x-2)$$

$$5x+6 = 6x-4$$

$$6 = x-4$$

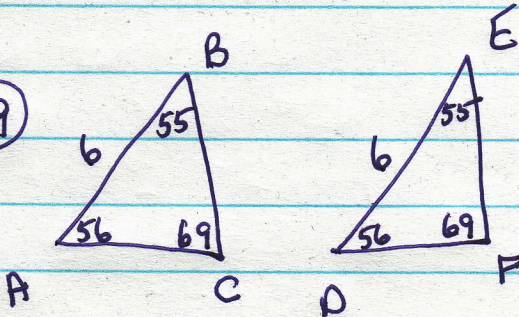
$$x = 10$$

$$EF = 5(10) + 6 = 56$$

$$BF = \frac{1}{2}(EF) = \frac{1}{2}(56)$$

$$= \boxed{28}$$

(49)



(H) $m\angle E = 56$

is not true

(50) $4x+7 = 2(3x+3)$

$$4x+7 = 6x+6$$

$$7 = 2x+6$$

$$2x = 1$$

$$x = \frac{1}{2}$$

(51) $A(-4, 6) \quad B(3, -5)$

$$7^2 + 11^2 = d^2$$

$$49 + 121 = d^2$$

$$170 = d^2$$

$$d = \sqrt{170} = 13.04$$

(52) $\angle 4 \not\sim \angle 2$ or $\angle 5$

(53) $2x-1 = x+4$

$$x = 5$$

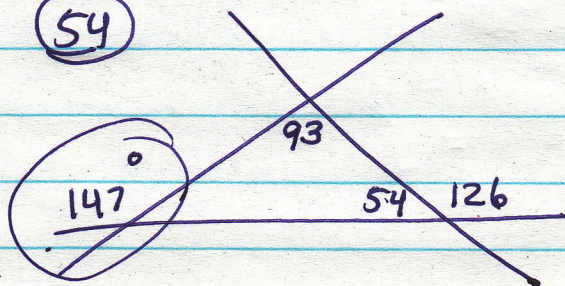
$$AB = 2(5)-1 = 9$$

$$BC = 5+4 = 9$$

$$AC = 9$$

equilateral Δ

(54)



$$\begin{aligned} (55) \quad 7x - 13 &= 4x + 26 \\ 3x &= 39 \\ x &= 13 \end{aligned}$$

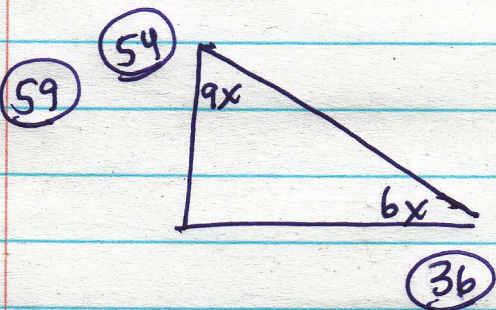
$$\begin{aligned} AB &= 4(13) + 26 = 78 \\ BC &= 7(13) - 13 = 78 \end{aligned}$$

(56) \overline{HJ} is the perpendicular bisector of \overline{GI}

$$\begin{aligned} (57) \quad 3z - 8 &= z - 4 \\ 2z &= 4 \\ \boxed{z = 2} \end{aligned}$$

D must lie on vertical line that passes through B ~~to~~
b/c $\overline{AD} \cong \overline{CD}$

(58) $\triangle MNO \cong \triangle PRQ$
AAS



$$\begin{aligned} 9x + 6x &= 90 \\ 15x &= 90 \\ x &= 6 \end{aligned}$$

(60) Converse: if 2 lines never intersect then they are parallel.
False. Skew lines

$$\begin{aligned} (61) \quad x + 3 + 3x &> 2x + 1 \\ 4x + 3 &> 2x + 1 \\ 2x &> -2 \\ x &> \frac{-2}{2} - 1 \\ &= -1 - 1 \\ &= -2 \end{aligned}$$

no help

$$\begin{aligned} 2x + 1 + 3x &> x + 3 \\ 5x + 1 &> x + 3 \\ 4x &> 2 \\ \boxed{x > \frac{1}{2}} \end{aligned}$$

$$\begin{aligned} x + 3 + 2x + 1 &> 3x \\ 3x + 4 &> 3x \\ &\text{no help} \end{aligned}$$

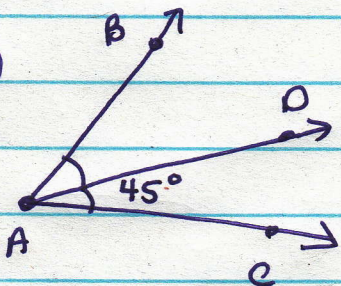
62

line 1 slope $\frac{11-6}{-7+3} = \frac{5}{-4}$

line 2 slope $\frac{4-8}{-4-1} = \frac{-4}{-5}$ perpendicular

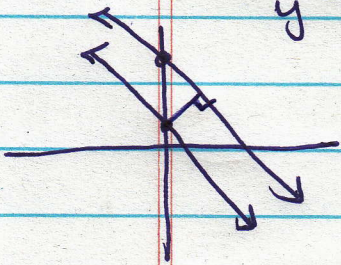
63 $180 - 73 = 107^\circ$

64



$m\angle BAC = 90^\circ$ b/c $2 \times 45^\circ$

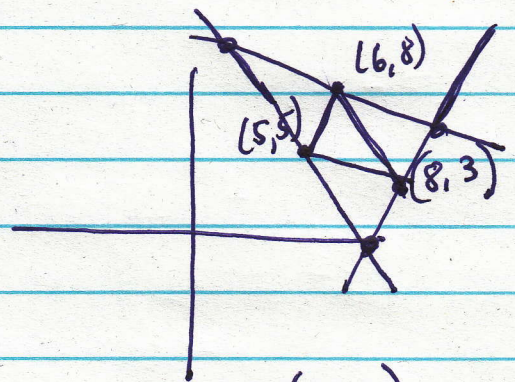
65 $y = -\frac{3}{2}x + 1$
 $y = -\frac{3}{2}x + 5$



$(0, 1) + (1.8 + 2.3)$

~~$\frac{1.8}{1.8}$~~ ≈ 2.22

66



- (6, 9)
- (10, 3)
- (7, 0)

67 $m = \frac{1}{3}$ (6, 2)

$y - 2 = \frac{1}{3}(x - 6)$

$y - 2 = \frac{1}{3}x - 2$

$y = \frac{1}{3}x$

68 $m\angle = 180 - 67 = 113^\circ$

69 $d^2 = 8^2 + 6^2$

$d^2 = 100$

$d = 10$

70 (2, 3)