## Set A

1) 6.5 2) 6 3) 3.5 4) 30 5) ⟶ 6) $z=3$, $PQ=6$, $PR=12$

## SET B

1) acute 2) obtuse 3) obtuse 4) 14°

## SET C

1) False; ex. the meas. could be 60°
2) True
3) Conv: If a # is divisible by 4, then the # is even. True
   Inv: If a # is not even, then it is not div. by 4. True
   Contra: If a # is not div by 4, then it is not even False

## SET D

1) not valid
2) If one ∠ of a △ is 90°, then its acute ∠'s are comp.
3) conv: If the sum of meas. of 2 ∠'s = 180, then ∠'s are supp.
   bi: 2 ∠'s are supp. iff the sum of their meas. = 180°.
4) True

## SET E

1) sym prop = 2) ref prop ≅ 3) trans prop ≅ 4) trans prop =
5) 135° 6) 23° 7) 122°

## SET F

1) m∠8 = 59 & m∠6 = 59 so ∠8 ≅ ∠6; thus, a∥b by conv. corr ∠'s post
2) a∥b by conv alt ext ∠'s thm
3) ∠8 & ∠7 are supp so a∥b by conv same side int ∠'s thm
4) ∠8 ≅ ∠4 so a∥b by conv alt int ∠'s thm
5) m∠1 = 54 & m∠2 = 54 so ∠1 ≅ ∠2; thus, they are ∥ by conv corr ∠'s post.

## SET G

1) $\overline{KM}$ 2) $x-5 < 8$; $x < 13$

## SET H

1) A'(3,5), B'(-5,7), C'(-3,-3); translation L2 & U3
2) A'(5,-2), B'(-3,-4), C'(-1,6); ref across x-axis
3) A'(-2,5), B'(-4,-3), C'(6,-1); rot 90° ccw about (0,0)
4) A'(15,6), B'(-9,12), C'(-3,-18); dil by 3 w/ center (0,0)

## SET I

1) 51° 2) 125°

## SET J

1) $\overline{EF}$ 2) $\overline{JL}$ 3) LE 4) LL 5) 25 6) 7

## SET K

1a. given
2b. alt int ∠'s thm
3c. given
4d. def ⊥
5e. ∠ACD ≅ ∠DBA
6f. ∠CAD ≅ ∠BDA
7g. given
8h. $\overline{AD} \cong \overline{DA}$
9i. def. ≅ △'s

## SET L

1)

| statements | reasons |
|---|---|
| 1) $\overline{JL}$ bis. ∠MJN | 1) given |
| 2) ∠MJK ≅ ∠NJK | 2) def. bis. |
| 3) $\overline{MJ} \cong \overline{NJ}$ | 3) given |
| 4) $\overline{JK} \cong \overline{JK}$ | 4) ref. prop. |
| 5) △MJK ≅ △NJK | 5) SAS ≅ |

2)

| statements | reasons |
|---|---|
| 1) $\overline{CD} \parallel \overline{BE}$ & $\overline{DE} \parallel \overline{CB}$ | 1) given |
| 2) ∠DEC ≅ ∠BCE & ∠DCE ≅ ∠BEC | 2) alt int ∠'s thm |
| 3) $\overline{EC} \cong \overline{CE}$ | 3) ref. prop |
| 4) △DEC ≅ △BCE | 4) ASA |
| 5) $\overline{LD} \cong \overline{LB}$ | 5) CPCTC |

**SET M**

1) $100°$ 2) 6 3) $ZV=45$, $PM=106$, $m\angle PZV=36°$ 4) 78 m

**SET N**

1) 27 cm 2) 17 cm 3) 13.5 cm 4) $78°$ 5) $78°$ 6) $102°$

7) $(-2,-4)$ 8) 11 9) 11 10) $81°$ 11) $99°$

**SET O**

1) yes 2) no 3) no

**SET P**

1) 40.25 2) 36 3) 80.5 4) 40.25 5) 25 6) $m\angle HJG=31°$, $m\angle GHJ=118°$

**SET Q**

1) $18\frac{2}{3}$ 2) 15 ; 20

**SET R**

1) C 2) G

**SET S**

1) $\Delta$; obtuse 2) not a $\Delta$ 3) $\Delta$; right 4) $\Delta$; acute

**SET T**

1) $x=24$, $y=24\sqrt{3}$ 2) $x=6\sqrt{3}$, $y=12$ 3) $x=\frac{14\sqrt{3}}{3}$, $y=\frac{28\sqrt{3}}{3}$

4) A 5) G

**SET U**

1) H 2) D 3) 23.30 in 4) 3.86 m 5) 3.71 cm

**SET V**

1) $m\angle A=58$, $BC=35.21$, $AC=41.52$ 2) $HJ=12.62$, $m\angle H=56°$, $m\angle J=34°$

3) $m\angle Z=62°$, $XY=4.50$, $YZ=2.39$ 4) $3°$

**SET W**

1) 2372 ft  2) 28.2 m

**SET X**

1) C  2) D  3) ref over y-axis then trans 2 down

4) left 3 then ref. $y=x$ OR ref $y=x$ then down 3

5) rot. 90°CCW & dilate by 2

**SET Y**

1) A''(0,2)  2) rot 270°CCW  3) R(0,-1)  4) J'(-1.5,1)  5) $y=1$

**SET Z**

1) A'(-2,3)  2) B'(7,1)  3) 3 or $\frac{1}{3}$  4) (-3,4)

5) 180° CW rot.  6) horizontal str by 3