Class Test 1

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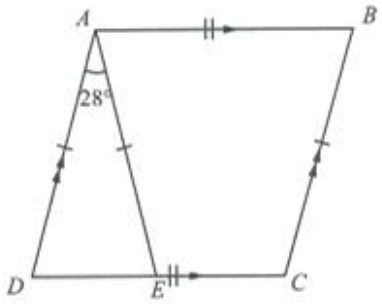
Answer all questions. Show your working clearly.

1. In the diagram below, $ABCD$ is a parallelogram. $\triangle ADE$ is an isosceles triangle where $AD = AE$. $\angle DAE = 28°$



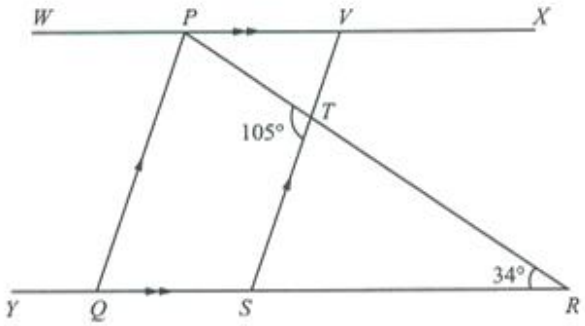
Find

(a) $\angle ADE$, [1]

(b) $\angle AEC$, [1]

(c) $\angle BAE$. [1]

2. In the diagram below, $WX // YR$ and $QP // SV$. $\angle TRS = 34°$ and $\angle PTS = 105°$.

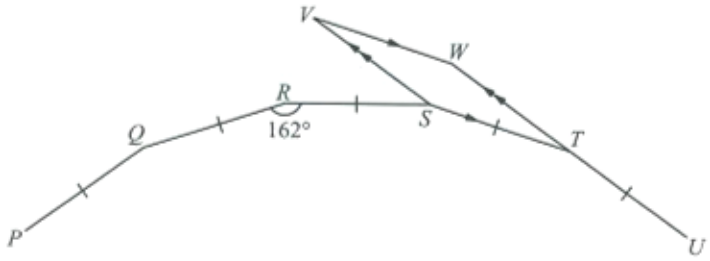


Find

(a) $\angle PVT$, [2]

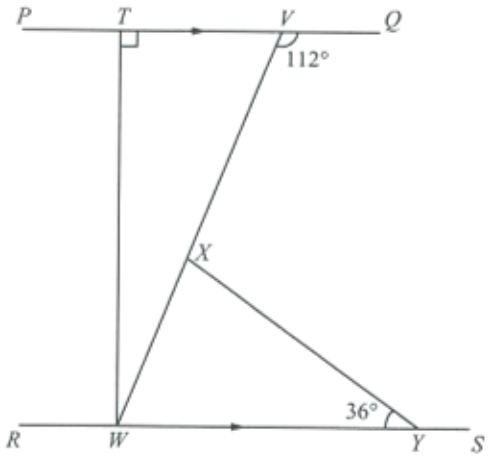
(b) $\angle PQY$. [1]

3. In the diagram below, $PQRSTU$ is part of a regular polygon with n sides. $\angle QRS = 162°$.



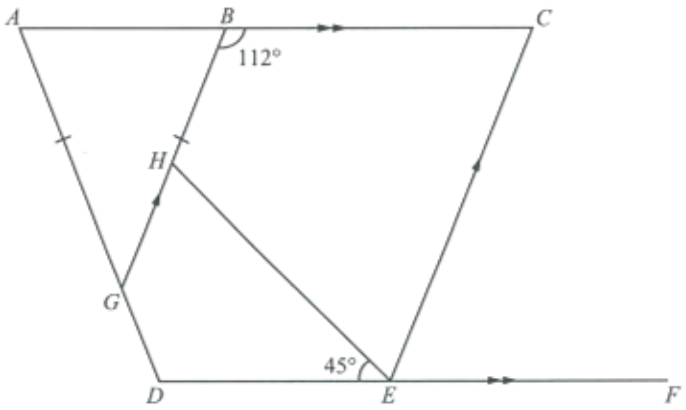
Find
(a) $\angle VWT$, [1]
(b) the value of n. [1]

4. In the diagram below, $PQ \parallel RS$. $\angle VTW$ is a right angle. $\angle QVW = 112°$ and $\angle XYW = 36°$.



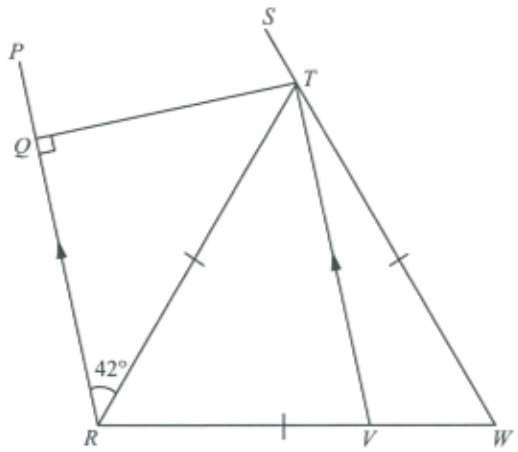
Find
(a) $\angle TWV$, [1]
(b) $\angle VXY$. [1]

5. In the diagram below, $AC \parallel DF$ and $GB \parallel EC$. $AG = BG$. $\angle CBG = 112°$ and $\angle HED = 45°$.



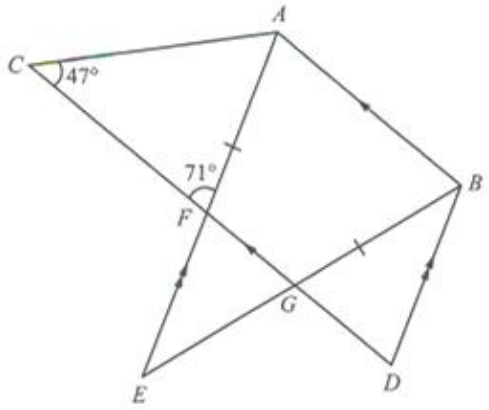
Find
(a) $\angle CEH$, [1]
(b) $\angle GDE$. [1]

6. In the diagram below, $RP \parallel VT$. $\triangle TQR$ is a right-angled triangle and $\triangle TWR$ is an equilateral triangle. $\angle TRQ = 42°$.



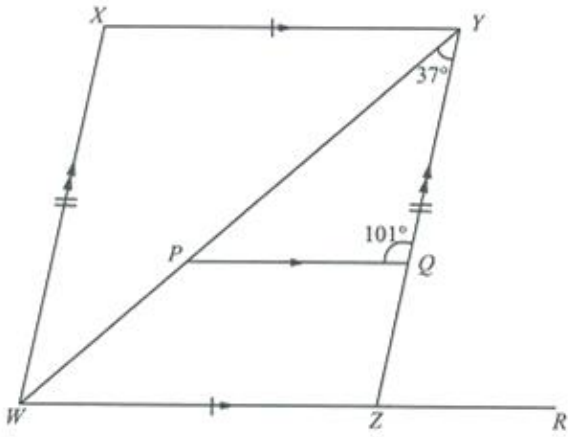
Find
(a) $\angle STQ$, [1]
(b) $\angle VTW$. [1]

7. In the diagram below, $BA \parallel DC$ and $EA \parallel DB$. $AE = BE$. $\angle AFC = 71°$ and $\angle ACF = 47°$.



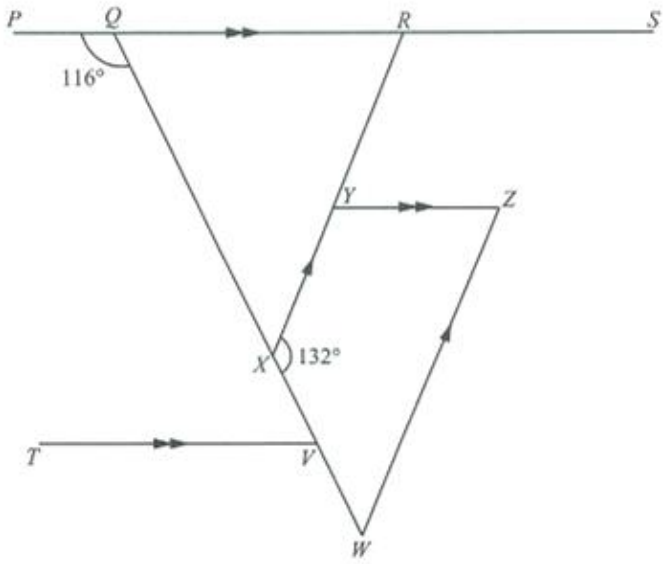
Find
(a) $\angle CAF$, [1]
(b) $\angle BGD$. [2]

8. In the diagram below, $WXYZ$ is a parallelogram and $PQ \parallel XY$.



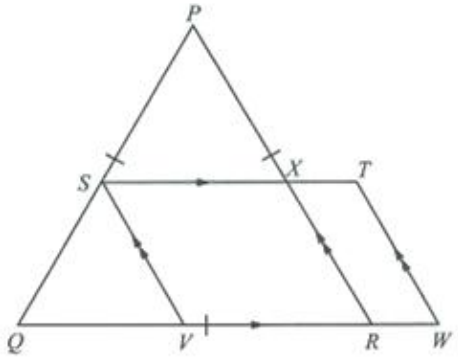
Find
(a) $\angle XYW$, [1]
(b) $\angle RZY$. [1]

9. In the diagram below, $PS // YZ // TV$ and $XR // WZ$. $\angle YXW = 132°$ and $\angle PQX = 116°$.



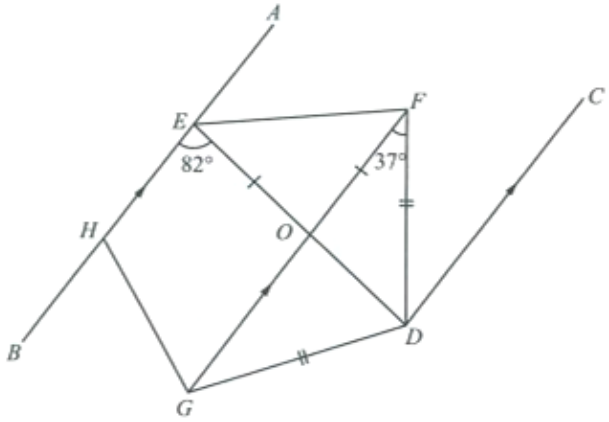
Find
(a) $\angle QRX$, [1]
(b) $\angle YZW$. [1]

10. In the diagram below, $\triangle PQR$ is an equilateral triangle.



Find
(a) $\angle SVR$, [1]
(b) reflex $\angle PXT$. [1]

11. In the diagram below, $BA \parallel GF \parallel DC$. $EO = OF$ and $DF = DG$. $\angle OEH = 82°$ and $\angle OFD = 37°$.

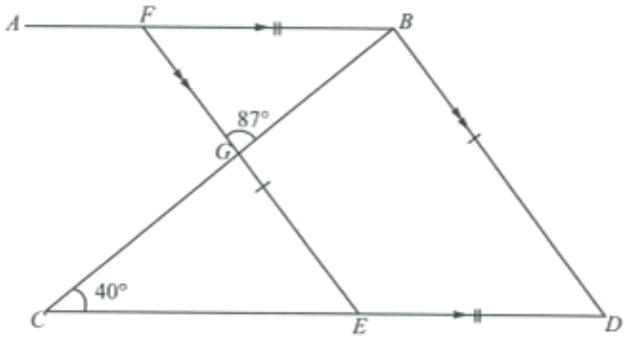


Find

(a) $\angle AEF$, [1]

(b) $\angle ODF$. [1]

12. In the diagram below, $BDEF$ is a parallelogram. AB, CD and BC are straight lines.

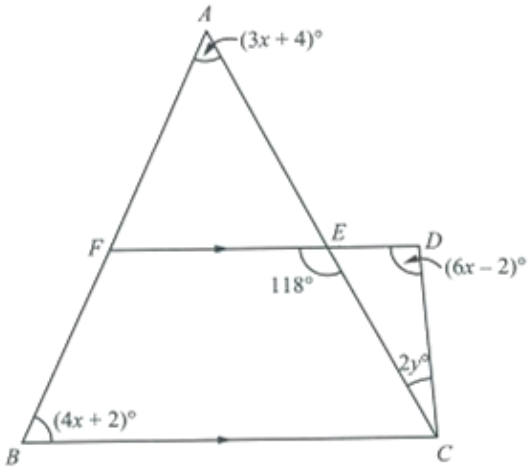


Find

(a) $\angle GED$, [1]

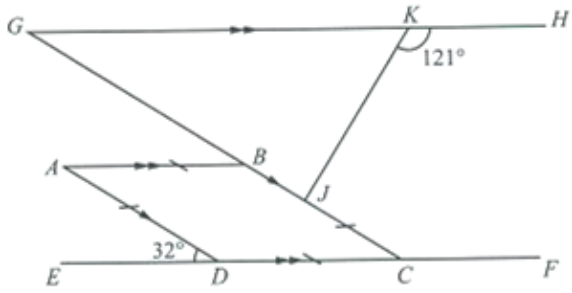
(b) reflex $\angle BDC$. [1]

13. In the diagram below, $FD \parallel BC$. AC and AB are straight lines and $\angle FEC = 118°$.



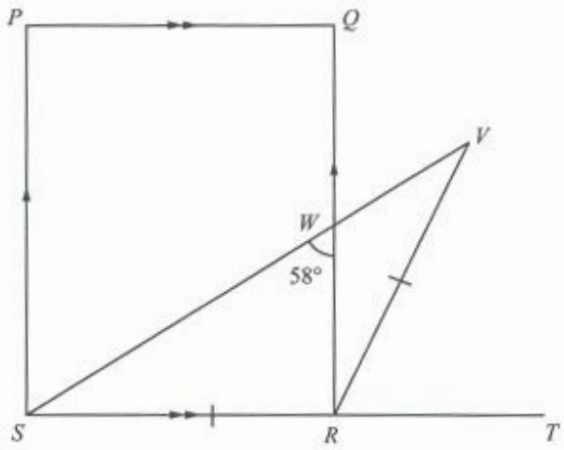
Find the value of x and of y. [4]

14. In the diagram below, $ABCD$ is a rhombus. $GH \parallel AB \parallel EF$. $\angle ADE = 32°$ and $\angle JKH = 121°$.



Find $\angle KJG$. [2]

15. In the diagram below, $PQRS$ is a rectangle. $VR = RS$ and $\angle SWR = 58°$.



Find $\angle VRW$. [2]