

靈糧堂劉梅軒中學
 中一基礎班
 第十三章 - 直線圖形中的角

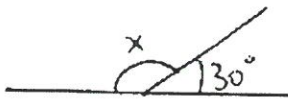
姓名: _____ ()

班別: S.1 _____

A. 與直線有關的角

求以下各題的未知數:

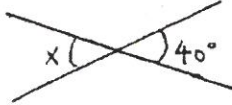
1.



$$x + 130^\circ = 180^\circ \quad (\text{直線上的鄰角})$$

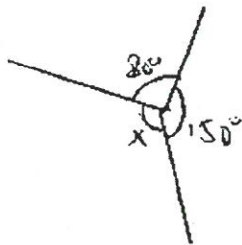
$$x = 130^\circ$$

2.



$$x = 40^\circ \quad (\text{對頂角})$$

3.



$$x + 80^\circ + 150^\circ = 360^\circ \quad (\text{周頂角})$$

$$x = 130^\circ$$

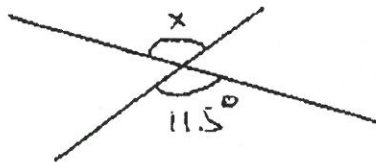
4.



$$y + 45^\circ = 180^\circ \quad (\text{直線上的鄰角})$$

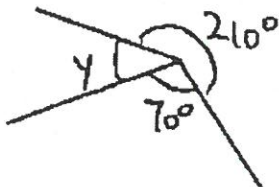
$$y = 135^\circ$$

5.



$$x = 115^\circ \quad (\text{對頂角})$$

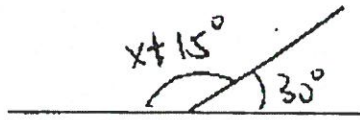
6.



$$y + 70^\circ + 210^\circ = 360^\circ \quad (\text{周頂角})$$

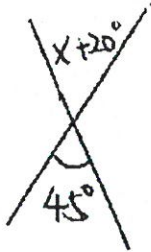
$$y = 80^\circ$$

7.



$$x + 15^\circ + 30^\circ = 180^\circ \text{ (直線上的鄰角)}$$

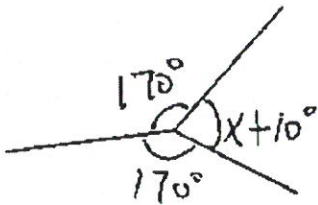
8.



$$x + 20^\circ = 45^\circ \text{ (對頂角)}$$

$$x = 25^\circ$$

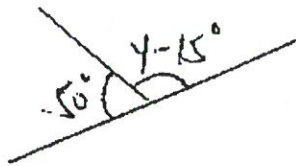
9.



$$170^\circ \times 2 + x + 10^\circ = 360^\circ \text{ (周頂角)}$$

$$x = 10^\circ$$

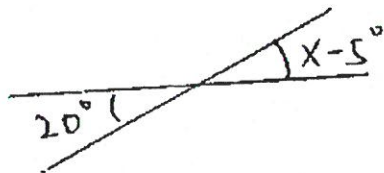
10.



$$50^\circ + y + y - 15^\circ = 180^\circ \text{ (直線上的鄰角)}$$

$$y = 145^\circ$$

11.

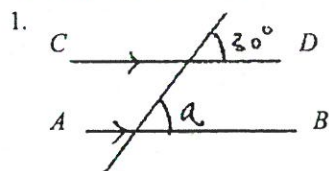


$$20^\circ = x - 5^\circ \text{ (對頂角)}$$

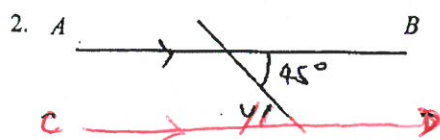
$$x = 25^\circ$$

B. 與平行線有關的角

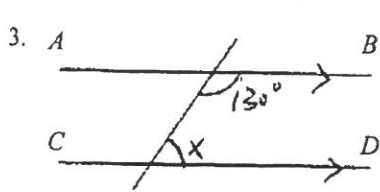
求以下各題的未知數:



$$x = 30^\circ \text{ (同位角, } AB \parallel CD)$$

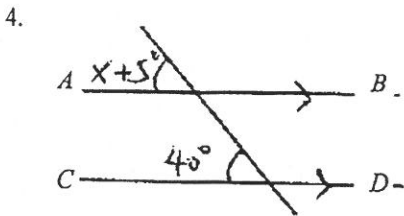


$$y = 45^\circ \text{ (錯角, } AB \parallel CD)$$



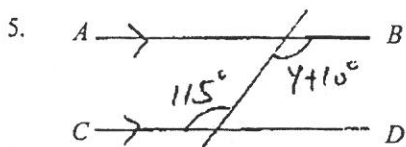
$$\frac{x + 130^\circ}{x} = \frac{180^\circ}{50^\circ} \text{ (同旁内角, } AB \parallel CD)$$

$$x = 50^\circ$$



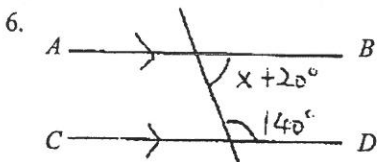
$$x + 5^\circ = 40^\circ \text{ (同位角, } AB \parallel CD)$$

$$x = 35^\circ$$



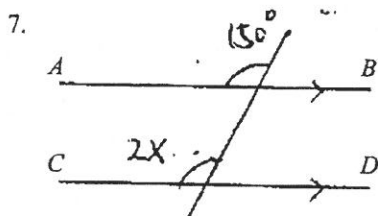
$$y + 10^\circ = 115^\circ \text{ (錯角, } AB \parallel CD)$$

$$y = 105^\circ$$



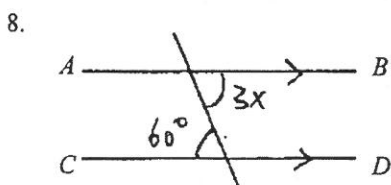
$$x + 20^\circ + 140^\circ = 180^\circ \text{ (同旁内角, } AB \parallel CD)$$

$$x = 20^\circ$$



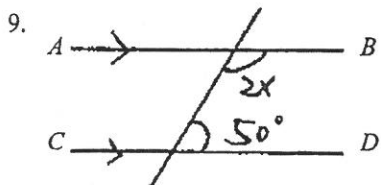
$$2x = 150^\circ \text{ (同位角, } AB \parallel CD)$$

$$x = 75^\circ$$



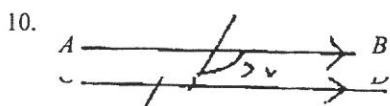
$$3x = 60^\circ \text{ (錯角, } AB \parallel CD)$$

$$x = 20^\circ$$



$$2x + 50^\circ = 180^\circ \text{ (同旁内角, } AB \parallel CD)$$

$$x = 65^\circ$$

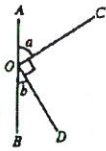
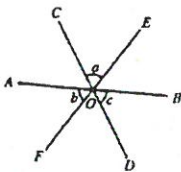
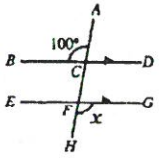
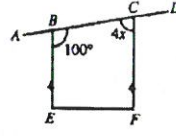
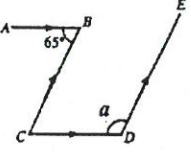
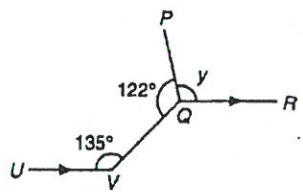


$$7x + 2x = 180^\circ \text{ (同旁内角, } AB \parallel CD)$$

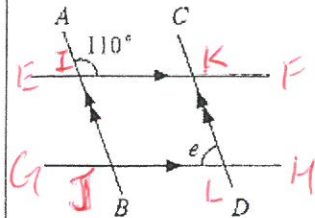
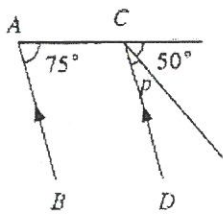
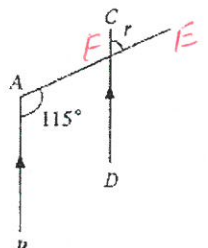
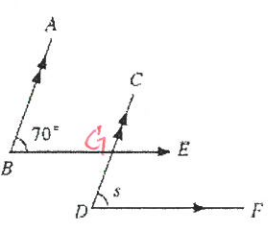
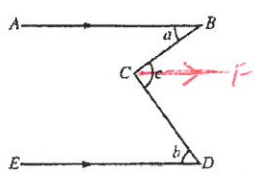
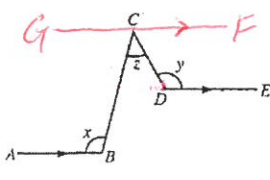
$$x = 36^\circ$$

總復習

1. 求下列各題中的知數。(須列出理由)

<p>(a) 求 $a+b$ 的值。</p> 	<p>(b) 求 $a+b+c$ 的值。</p> 
<p>$a+b+90^\circ=180^\circ$ (直線上的鄰角) $a+b=90^\circ$</p>	<p>$\angle FOD = a$ (對頂角) $a+b+c=180^\circ$ (直線上的鄰角)</p>
<p>(c)</p> 	<p>(d)</p> 
<p>$\angle AFE = x$ (對頂角) $x = 100^\circ$ (同位角, $BD \parallel EG$)</p>	<p>$4x + 100^\circ = 180^\circ$ (同旁內角, $BE \parallel CF$) $x = 20^\circ$</p>
<p>(e)</p> 	<p>(f)</p> 
<p>$\angle BCD = 65^\circ$ (錯角, $AB \parallel CD$) $a + 65^\circ = 180^\circ$ (同旁內角, $BC \parallel DE$) $a = 115^\circ$</p>	<p>$\angle RQV = 135^\circ$ (錯角, $QR \parallel UV$) $y + 122^\circ + 135^\circ = 360^\circ$ (周角) $y = 103^\circ$</p>

2. 求下列各圖形中的未知數。(須列出理由)

<p>(a)</p> 	<p>(b)</p> 
<p>$\angle AJH = 110^\circ$ (同位角, $EF \parallel GH$) $e + 110^\circ = 180^\circ$ (同旁內角, $AB \parallel CD$) $e = 70^\circ$,</p>	<p>$p + 50^\circ = 75^\circ$ (同位角, $AB \parallel CD$) $p = 25^\circ$,</p>
<p>(c)</p> 	<p>(d)</p> 
<p>$\angle EFD = 115^\circ$ (同位角, $AB \parallel CD$) $r + 115^\circ = 180^\circ$ (直線上的鄰角) $r = 65^\circ$</p>	<p>$\angle CGE = 70^\circ$ (同位角, $AB \parallel CD$) $s = 70^\circ$ (同位角, $BE \parallel DF$)</p>
<p>(e) 圖中, 已知 $a = 20^\circ$ 及 $b = 40^\circ$, 求 c。</p> 	<p>(f) 圖中, 已知 $x = 110^\circ$ 及 $y = 120^\circ$, 求 z。</p> 
<p>$\angle BCF = a = 20^\circ$ (錯角, $AB \parallel CF$) $\angle DCF = b = 40^\circ$ (錯角, $CF \parallel ED$) $c = 20^\circ + 40^\circ$ $c = 60^\circ$,</p>	<p>$\angle GCB + 110^\circ = 180^\circ$ (同旁內角, $AB \parallel GF$) $\angle GCB = 70^\circ$ $\angle FCD + 120^\circ = 180^\circ$ (同旁內角, $DE \parallel GF$) $\angle FCD = 60^\circ$ $z + 60^\circ + 70^\circ = 180^\circ$ (直線上的鄰角) $z = 50^\circ$</p>

