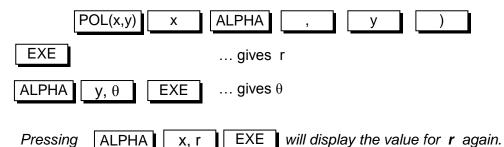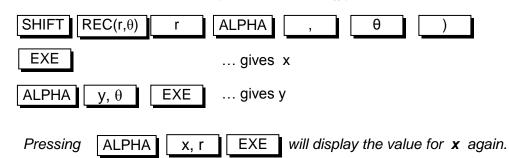**COMPLEX NUMBERS**
(Conversions using Casio Dot Matrix Calculator)

Always put calculator into the required mode first : DEG or RAD.

- **RECTANGULAR TO POLAR (z = x+jy → z = r∠θ)**

| POL(x,y) | x | ALPHA | , | y |) |

| EXE | … gives r

| ALPHA | y, θ | EXE | … gives θ

   Pressing | ALPHA | x, r | EXE | *will display the value for* **r** *again.*

- **POLAR TO RECTANGULAR (z = r∠θ → z = x+jy)**

| SHIFT | REC(r,θ) | r | ALPHA | , | θ |) |

| EXE | … gives x

| ALPHA | y, θ | EXE | … gives y

   Pressing | ALPHA | x, r | EXE | *will display the value for* **x** *again.*
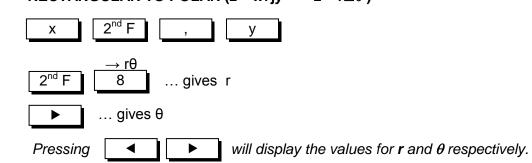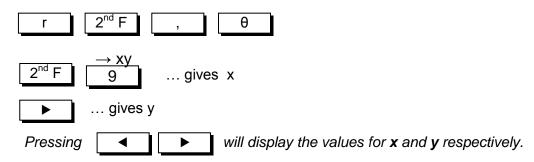

COMPLEX NUMBERS
(Conversions using Sharp Calculators E509L, E546L, 520L)

Always put calculator into the required mode first : DEG or RAD.

- **RECTANGULAR TO POLAR (z = x+jy → z = r∠θ)**

| x | 2nd F | , | y |

| 2nd F | 8 (→ rθ) | … gives r

| ► | … gives θ

   Pressing | ◄ | ► | *will display the values for* **r** *and* **θ** *respectively.*

- **POLAR TO RECTANGULAR (z = r∠θ → z = x+jy)**

| r | 2nd F | , | θ |

| 2nd F | 9 (→ xy) | … gives x

| ► | … gives y

   Pressing | ◄ | ► | *will display the values for* **x** *and* **y** *respectively.*

COMPLEX NUMBERS (Conversions using Sharp Calculator E531GH, 590G)

Always put calculator into the required mode first ς DEG or RAD.

- **RECTANGULAR TO POLAR (z = x+jy → z = r∠θ)**

x	2ⁿᵈ F	,	y

$\boxed{→ rθ}$ … gives r

$\boxed{\frac{CA}{→}}$ … gives θ

Pressing $\boxed{\frac{CA}{→}}$ *continuously will display the values for **r** and **θ** respectively.*

- **POLAR TO RECTANGULAR (z = r∠θ → z = x+jy)**

r	2ⁿᵈ F	,	θ

$\boxed{2^{nd}\ F}$ $\boxed{\frac{→ xy}{→ rθ}}$ … gives x

$\boxed{\frac{CA}{→}}$ … gives y

Pressing $\boxed{\frac{CA}{→}}$ *continuously will display the values for **x** and **y** respectively.*

COMPLEX NUMBERS (Conversions using Sharp Calculators E531RH)

Always put calculator into the required mode first : DEG or RAD.

- **RECTANGULAR TO POLAR (z = x+jy → z = r∠θ)**

x	2ⁿᵈ F	,	y

$\boxed{2^{nd}\ F}$ $\boxed{\frac{→ rθ}{8}}$ … gives r

$\boxed{2^{nd}\ F}$ $\boxed{Exp}$ … gives θ

Pressing $\boxed{2^{nd}\ F}$ $\boxed{Exp}$ *will display the values for **r** and **θ** respectively.*

- **POLAR TO RECTANGULAR (z = r∠θ → z = x+jy)**

r	2ⁿᵈ F	,	θ

$\boxed{2^{nd}\ F}$ $\boxed{\frac{→ xy}{9}}$ … gives x

$\boxed{2^{nd}\ F}$ $\boxed{Exp}$ … gives y

Pressing $\boxed{2^{nd}\ F}$ $\boxed{Exp}$ *will display the values for **x** and **y** respectively.*

COMPLEX NUMBERS (Conversions using Casio S.V.P.A.M. Calculator)

Always put calculator into the required mode first ç DEG or RAD.

- **RECTANGULAR TO POLAR (z = x+jy ç z = r θ)**

  | SHIFT | | POL (| | x | | , | | y | |) |

  | = | … gives r (which is stored in memory cell 'E')

  | RCL | | F | … gives θ (which is stored in memory cell 'F')

  Pressing | RCL | | E | *or* | RCL | | F | *will display the values for* ***r*** *and* ***θ***
  respectively.

- **POLAR TO RECTANGULAR (z = r θ ç z = x+jy)**

  | SHIFT | | REC(| | r | | , | | θ | |) |

  | = | … gives x (which is stored in memory cell 'E')

  | RCL | | F | … gives y (which is stored in memory cell 'F')

  Pressing | RCL | | E | *or* | RCL | | F | *will display the values for* ***x*** *and* ***y***
  respectively.

COMPLEX NUMBERS (Conversions using Casio Super-fx or V.P.A.M. Calculator)

Always put calculator into the required mode first : DEG or RAD.

- **RECTANGULAR TO POLAR (z = x+jy to z = r∠θ)**

  | x | | SHIFT | | + (R→P) | | y |

  | = | … gives r

  | X↔Y | *… gives θ

  Pressing | X↔Y | *will alternately display the values for* ***r*** *and* ***θ***

- **POLAR TO RECTANGULAR (z = r∠θ → z = x+jy)**

  | r | | SHIFT | | - (P→R) | | θ |

  | = | … gives x

  | X↔Y | *… gives y

  Pressing | X↔Y | *or will alternately display the values for* ***x*** *and* ***y.***

  * If X↔Y is coloured brown/orange/red, you'll have to press | SHIFT | | X↔Y |