F2L 1 ⌁

3x3 – F2L – Free Pairs

Front Right	Front Left	Back Left	Back Right

⌄ U R U' R' 🎓 ☆

⌄ R' F R F' 🎓 ☆

⌄ y' r' U' R U M' 🎓 ☆

⌄ M' U R U' r' 🎓 ☆

F2L 2 ⌁

3x3 – F2L – Free Pairs

Front Right	Front Left	Back Left	Back Right

⌄ F R' F' R 🎓 ☆

⌄ y' U' R' U R 🎓 ☆

⌄ U' F' U F 🎓 ☆

⌄ y U' L' U L 🎓 ☆

F2L 3 ⌟

3x3 – F2L – Free Pairs

setup:

F' U F

Front Right	Front Left	Back Left	Back Right

⌄ F' U' F

⌄ y' R' U' R

⌄ y L' U' L

⌄ S U R U' R' S'

F2L 4 ⌟

3x3 – F2L – Free Pairs

setup:

R U' R'

Front Right	Front Left	Back Left	Back Right

⌄ R U R'

⌄ y' f R f'

⌄ y F U F'

⌄ y2 L U L'

F2L 5 ⌟

3x3 – F2L – Disconnected Pairs

setup:

R U R' U2' R U' R' U

Front Right	Front Left	Back Left	Back Right

⌄ U' R U R' U2 R U' R'

⌄ F2 L' U' L U F2

⌄ U' R U R' U' R U2 R'

⌄ U' R U R' U R' F R F'

F2L 6 ⤴

3x3 – F2L – Disconnected Pairs

setup:
F' U' F U2' F' U F U'

Front Right	Front Left	Back Left	Back Right

⌄ U' r U' R' U R U r'			🎓 ☆
⌄ y' U R' U' R U2 R' U R			🎓 ☆
⌄ d R' U' R U2 R' U R			🎓 ☆
⌄ U F' U' F U2 F' U F			🎓 ☆

F2L 7 ⤴

3x3 – F2L – Disconnected Pairs

setup:
R U R' U2' R U2' R' U

Front Right	Front Left	Back Left	Back Right

⌄ U' R U2 R' U' R U2 R'			🎓 ☆
⌄ M' U' M U2 r U' r'			🎓 ☆
⌄ U' R U2 R' U R' F R F'			🎓 ☆
⌄ U' R U2 R' U2 R U' R'			🎓 ☆

F2L 8 ⤴

3x3 – F2L – Disconnected Pairs

setup:
r' U' R2 U' R2' U2' r

Front Right	Front Left	Back Left	Back Right

⌄ d R' U2 R U R' U2 R			🎓 ☆
⌄ r' U2 R2 U R2 U r			🎓 ☆
⌄ y' U R' U2 R U2 R' U R			🎓 ☆
⌄ y U L' U2 L U2 L' U L			🎓 ☆

F2L 9 🔗

3x3 – F2L – Disconnected Pairs

Front Right	Front Left	Back Left	Back Right

U' R U' R' U F' U' F

F R U R' U' F' R U' R'

U' R U' R' d R' U' R

d R' U' R U' R' U' R

F2L 10 🔗

3x3 – F2L – Disconnected Pairs

Front Right	Front Left	Back Left	Back Right

U' R U R' U R U R'

U2 R U' R' U' R U R'

y' U R' U R U' f R f'

d R' U R d' R U R'

F2L 11 ⤴

3x3 – F2L – Connected Pairs

setup:
F' U F U' R U2' R' U

| Front Right | Front Left | Back Left | Back Right |

∨ U' R U2 R' U F' U' F

∨ y' R U2 R2 U' R2 U' R'

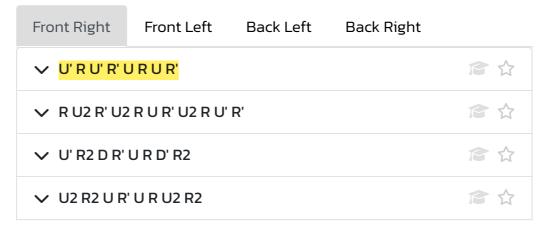∨ U' R U2 R' d R' U' R

∨ F' U L' U2 L U2 F

F2L 12 ⤴

3x3 – F2L – Connected Pairs

setup:
R U R' U2' R U R' U' R U R'

| Front Right | Front Left | Back Left | Back Right |

∨ R U' R' U R U' R' U2 R U' R'

∨ R' U2 R2 U R2 U R

∨ U R U' R' U' R U R' U' R U R'

∨ R' D' R U2 R' D R2 U R'

F2L 13 ⤴

3x3 – F2L – Connected Pairs

setup:
r U2' R' U R U' R' U M

| Front Right | Front Left | Back Left | Back Right |

∨ y' U R' U R U' R' U' R

∨ M' U' R U R' U2 R U' r'

∨ d R' U R U' R' U' R

∨ R U' R' U R' F R F' R U' R'

F2L 14 ⌁

3x3 – F2L – Connected Pairs

setup:
R U' R' U' R U R' U

| Front Right | Front Left | Back Left | Back Right |

⌄ U' R U' R' U R U R'		🎓 ☆
⌄ R U2 R' U2 R U R' U2 R U' R'		🎓 ☆
⌄ U' R2 D R' U R D' R2		🎓 ☆
⌄ U2 R2 U R' U R U2 R2		🎓 ☆

F2L 15 ⌁

3x3 – F2L – Connected Pairs

setup:
R U R' U' R U R' U2' R U' R'

| Front Right | Front Left | Back Left | Back Right |

⌄ R' D' R U' R' D R U R U' R'		🎓 ☆
⌄ R U R' U2 R U' R' U R U' R'		🎓 ☆
⌄ M U r U' r' U' M'		🎓 ☆
⌄ F' U F U2 R U R'		🎓 ☆

F2L 16 ⌁

3x3 – F2L – Connected Pairs

setup:
F' U F U2' R U R'

| Front Right | Front Left | Back Left | Back Right |

⌄ R U' R' U2 F' U' F		🎓 ☆
⌄ R U' R' U2 y' R' U' R		🎓 ☆
⌄ U M' U R U' r' U' R U R'		🎓 ☆
⌄ U F U R U' R' F' R U R'		🎓 ☆

F2L 17 ⌁

3x3 – F2L – Connected Pairs

setup:
R U' R' U R U2' R'

| Front Right | Front Left | Back Left | Back Right |

∨ R U2 R' U' R U R'	🎓 ☆
∨ y2 L U2 L' U' L U L'	🎓 ☆
∨ R U R' U' R U2 R' U2 R U R'	🎓 ☆
∨ y L F' L' F L' U L U' L' U L	🎓 ☆

F2L 18 ⌁

3x3 – F2L – Connected Pairs

setup:
R U R' U' R U R' F R' F' R

| Front Right | Front Left | Back Left | Back Right |

∨ y' R' U2 R U R' U' R	🎓 ☆
∨ R' F R F' R U' R' U R U' R'	🎓 ☆
∨ y L' U2 L U L' U' L	🎓 ☆
∨ F' U2 F U F' U' F	🎓 ☆

F2L 19 ⌁

3x3 – F2L – Disconnected Pairs

setup:
R U R' U' R U2' R' U'

| Front Right | Front Left | Back Left | Back Right |

∨ U R U2 R' U R U' R'	🎓 ☆
∨ U R U2 R2 F R F'	🎓 ☆
∨ d f R2 f' U f R' f'	🎓 ☆
∨ R U' R' U R U' R' U R U R'	🎓 ☆

F2L 20 ⤴

3x3 – F2L – Disconnected Pairs

Front Right   Front Left   Back Left   Back Right

⌄ y' U' R' U2 R U' R' U R	
⌄ U' R U' R2 F R F' R U' R'	
⌄ y U' L' U2 L U' L' U L	
⌄ d' L' U2 L U' L' U L	

F2L 21 ⤴

3x3 – F2L – Disconnected Pairs

Front Right   Front Left   Back Left   Back Right

⌄ U2 R U R' U R U' R'	
⌄ R U' R' U2 R U R'	
⌄ R B U2 B' R'	
⌄ y' f R' f' U2 f R f'	

F2L 22 ⌘

3x3 – F2L – Disconnected Pairs

setup:
F' L' U2' L F

Front Right	Front Left	Back Left	Back Right

r U' r' U2 r U r'

F' L' U2 L F

y' U2 R' U' R U' R' U R

y U2 L' U' L U' L' U L

F2L 23 ⌘

3x3 – F2L – Connected Pairs

setup:
R U' R' U R U' R' U2' R U' R'

Front Right	Front Left	Back Left	Back Right

U R U' R' U' R U' R' U R U' R'

R U R' U2 R U R' U' R U R'

U2 R2 U2 R' U' R U' R2

R U' R2 D' R U2 R' D R

F2L 24 ⌘

3x3 – F2L – Connected Pairs

setup:
R U R' F R U R' U' F'

Front Right	Front Left	Back Left	Back Right

F U R U' R' F' R U' R'

y' R' U' R U2 R' U' R U R' U' R

U' R U R2 F R F' R U' R'

y U' L' U L U L' U L U' L' U L

F2L 25 ⤴

3x3 – F2L – Corner In Slot

Front Right   Front Left   Back Left   Back Right

- ⌄ U' R' F R F' R U R'
- ⌄ R' F' R U R U' R' F
- ⌄ U' F' R U R' U' R' F R
- ⌄ U' F' U F U R U' R'

F2L 26 ⤴

3x3 – F2L – Corner In Slot

Front Right   Front Left   Back Left   Back Right

- ⌄ U R U' R' F R' F' R
- ⌄ R S' R' U R S R'
- ⌄ U R U R' U' y L' U' L
- ⌄ y' R U R U R U' R' U' R'

F2L 27 ⤴

3x3 – F2L – Corner In Slot

Front Right   Front Left   Back Left   Back Right

- ⌄ R U' R' U R U' R'
- ⌄ F' U' F U2 R U' R'
- ⌄ y' f R' f' U f R' f'
- ⌄ y' f R' f' r' U' R U M'

F2L 28 ◁

3x3 – F2L – Corner In Slot

Front Right	Front Left	Back Left	Back Right

> ⌄ R U R' U' F R' F' R

> ⌄ y L' U L U' L' U L

> ⌄ F' U F U' F' U F

> ⌄ y' R' U R U' R' U R

F2L 29 ◁

3x3 – F2L – Corner In Slot

Front Right	Front Left	Back Left	Back Right

> ⌄ R' F R F' U R U' R'

> ⌄ y' R' U' R U R' U' R

> ⌄ y L' U' L U L' U' L

> ⌄ R' F R F' R' F R F'

F2L 30 ◁

3x3 – F2L – Corner In Slot

Front Right	Front Left	Back Left	Back Right

> ⌄ R U R' U' R U R'

> ⌄ U' F R' F' R2 U R'

> ⌄ U' R U2 R' U2 R U R'

> ⌄ U2 F' U F R U R'

F2L 31 ⤴

3x3 – F2L – Edge In Slot

setup:
R U R' F R' F' R U

Front Right	Front Left	Back Left	Back Right

⌄ U' R' F R F' R U' R'   🎓 ☆

⌄ R U' R' U y' R' U R   🎓 ☆

⌄ F' U F R U2 R'   🎓 ☆

⌄ R U' R' U2 F R' F' R   🎓 ☆

F2L 32 ⤴

3x3 – F2L – Edge In Slot

setup:
R U' R' U R U' R' U R U' R'

Front Right	Front Left	Back Left	Back Right

⌄ U R U' R' U R U' R' U R U' R'   🎓 ☆

⌄ R U R' U' R U R' U' R U R'   🎓 ☆

⌄ R2 U R2 U R2 U2 R2   🎓 ☆

⌄ U' F R' F' R U' R U R'   🎓 ☆

F2L 33 ⤴

3x3 – F2L – Edge In Slot

Front Right   Front Left   Back Left   Back Right

⌄ U' R U' R' U2 R U' R'	🎓 ☆
⌄ R U R' U' R U' R' U R U' R'	🎓 ☆
⌄ y R' D R U' R' D' R	🎓 ☆
⌄ U' R U' R' U R' F R F'	🎓 ☆

F2L 34 ⤴

3x3 – F2L – Edge In Slot

Front Right   Front Left   Back Left   Back Right

⌄ U R U R' U2 R U R'	🎓 ☆
⌄ U' R U2 R' U R U R'	🎓 ☆
⌄ U R' D' R U' R' D R	🎓 ☆
⌄ y U L' U L U2 L' U L	🎓 ☆

F2L 35 ⤴

3x3 – F2L – Edge In Slot

Front Right   Front Left   Back Left   Back Right

⌄ U' R U R' U F' U' F	🎓 ☆
⌄ U' R U R' d R' U' R	🎓 ☆
⌄ U2 R U R' F R' F' R	🎓 ☆
⌄ U2 R U R' y' U' R' U R	🎓 ☆

F2L 36 ⌚

3x3 – F2L – Edge In Slot

setup:
R U' R' U2' F R' F' R U2'

| Front Right | Front Left | Back Left | Back Right |

⌄ U F' U' F U' R U R'

⌄ U2 R' F R F' U2 R U R'
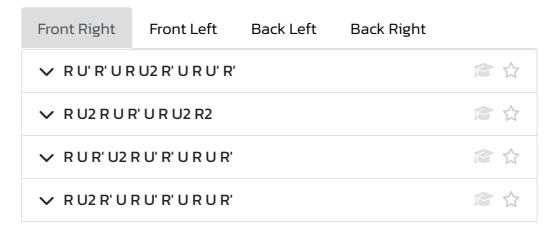
⌄ R2 u R U R' U' u' R' U R'

⌄ R U R' U R U R' U' F' U' F

F2L 37 ⌚

3x3 – F2L – Pieces In Slot

setup:
R U' R U2' F R2' F' U2' R2'

| Front Right | Front Left | Back Left | Back Right |

⌄ R2 U2 F R2 F' U2 R' U R'

⌄ R' F R F' R U' R' U R U' R' U2 R U' R'

⌄ R U R' U2 R U2 R' U y' R' U' R

⌄ R' F R F' R' U2 R2 U R2 U R

F2L 38 ⌚

3x3 – F2L – Pieces In Slot

setup:
R U' R' U R U2' R' U R U' R'

| Front Right | Front Left | Back Left | Back Right |

⌄ R U' R' U' R U R' U2 R U' R'

⌄ R U R' U' R U2 R' U' R U R'

⌄ R2 U2 R' U' R U' R' U2 R'

⌄ R U' R' U' R U R' U' R U2 R'

F2L 39 ⌁

3x3 – F2L – Pieces In Slot

| Front Right | Front Left | Back Left | Back Right |

⌄ R U' R' U R U2 R' U R U' R'

⌄ R U2 R U R' U R U2 R2

⌄ R U R' U2 R U' R' U R U R'

⌄ R U2 R' U R U' R' U R U R'

F2L 40 ⌁

3x3 – F2L – Pieces In Slot
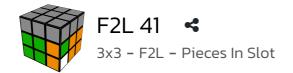
| Front Right | Front Left | Back Left | Back Right |

⌄ r U' r' U2 r U r' R U R'

⌄ F' L' U2 L F R U R'

⌄ R U' R' U' R U' R' U y' R' U' R

⌄ R U' R' F R U R' U' F' R U' R'

F2L 41 ⌗

3x3 – F2L – Pieces In Slot

Front Right   Front Left   Back Left   Back Right

⌄ R U' R' r U' r' U2 r U r'

⌄ R U' R' F' L' U2 L F

⌄ R U R' U' y M U' R' F R U M'

⌄ R U R' U' R U' R' U2 y' R' U' R