

## Takeoff Calculations Worksheet

Date \_\_\_\_\_ Airport \_\_\_\_\_

### Field Data and Conditions

Altimeter Setting \_\_\_\_\_

 Wind, **Magnetic** \_\_\_\_\_

Temperature \_\_\_\_\_

Field Elevation \_\_\_\_\_

Runway In Use \_\_\_\_\_

Note: If From TAF / METAR ect. Convert to Magnetic

<b>Calculate</b>	Head wind	Cross Wind
	_____ Kts	_____ Kts

### Calculate Wind Factor

Head Wind \_\_\_\_\_ Kts Divided by 9 = \_\_\_\_\_ X 10 = \_\_\_\_\_ % Headwind Factor

Tail Wind \_\_\_\_\_ Kts Divided by 2 = \_\_\_\_\_ X 10 = \_\_\_\_\_ % Tail Wind Factor

**Caution:** Max 10 kts - No more than 5 kts recommended - ADD Tail Wind Factor

### Calculate Pressure Altitude

Note: If result is below sea level use sea level pressure altitude.

	Altimeter Setting		Note: May be Negative or Positive.		Field Elevation		Pressure Altitude
29.92 -	_____	=	_____	X 1000 =	_____	+	_____ = _____

### Cessna Charts

From the Cessna Takeoff Charts (5.12 -5.13) find the sets of distances that bracket the actual temperature and the actual pressure altitude. Temper 1 will be the low temperature and Temp 2 will be the high temperature. Pressure Altitude 1 will be the low pressure and Pressure Altitude 2 will be the high pressure. Note: if the temperature or pressure matches one in the charts you do not need to do an adjustment for that chart.

#### Temperature Factor Calculation

_____ c	Actual Temp
- _____ c	Temp 1
= _____ c X 10 = _____ %	Temperature Factor

#### Pressure Altitude Factor Calculation

_____	Actual Pressure Altitude
- _____	Pressure Altitude 1
= _____ X 0.1 = _____ %	Pressure Alt Factor

### Temperature Adjustment

Cessna	Chart Pressure Altitude 1 = _____ ft
	Ground Roll                      Total To Clear 50 ft Obstacle
Temp 2 _____ Distances	_____
Temp 1 _____ Distances	_____
Difference =	=
Temperature Factor X _____ %	X _____ %
=	=
Temp 1 Distances +	+
<b>Adjusted Distances</b> A1 =	A2 =

Chart Pressure Altitude 2 = _____ ft
Ground Roll                      Total To Clear 50 ft Obstacle
_____
_____
=
X _____ %
=
+
B1 =
B2 =

### Pressure Altitude and Wind Adjustment

Temp Adjusted Distances B1	_____	B2	_____
Temp Adjusted Distances A1 -	_____	A2 -	_____
Difference =	_____	=	_____
Pressure Alt. Factor X _____ %		X _____ %	
=	_____	=	_____
Temp Adjusted Distances + A1	_____	+ A2	_____
<b>Adjusted Distances</b> =	_____	=	_____
Subtract Headwind Factor - _____ %		- _____ %	
=	_____	=	_____

#### Caution:

Add Tailwind Factor - Max 50%

### Grass Runway Adjustment

Ground Roll Distance	_____
	X 15 %
Grass Adjustment =	_____
Ground Roll Distance	_____
Grass Adjustment +	_____
<b>Final Ground Roll Distance</b> =	_____
Total To Clear 50 Feet	_____
Grass Adjustment +	_____
<b>Final Total to Clear 50 ft</b> =	_____

# Landing Calculations Worksheet

Date \_\_\_\_\_ Airport \_\_\_\_\_

**Field Data and Conditions**

 Altimeter Setting \_\_\_\_\_  
 Wind, Magnetic \_\_\_\_\_

 Temperature \_\_\_\_\_  
 Field Elevation \_\_\_\_\_  
 Runway In Use \_\_\_\_\_

Note: If From TAF / METAR ect. Convert to Magnetic

	Head wind	Cross Wind
<b>Calculate</b>	_____ Kts	_____ Kts

**Calculate Wind Factor**

 Head Wind \_\_\_\_\_ Kts Divided by 9 = \_\_\_\_\_ X 10 = \_\_\_\_\_ % Headwind Factor  
 Tail Wind \_\_\_\_\_ Kts Divided by 2 = \_\_\_\_\_ X 10 = \_\_\_\_\_ % Tail Wind Factor

**Caution:** Max 10 kts - No more than 5 kts recommended - ADD Tail Wind Factor

**Calculate Pressure Altitude**

Note: If result is below sea level use sea level pressure altitude.

	Altimeter Setting	Note: May be Negative or Positive.	Field Elevation	Pressure Altitude
29.92 -		=		X 1000 =
				+
				=

**Cessna Charts**

From the Cessna Landing Charts (5.12 -5.13) find the sets of distances that bracket the actual temperature and the actual pressure altitude. Temper 1 will be the low temperature and Temp 2 will be the high temperature. Pressure Altitude 1 will be the low pressure and Pressure Altitude 2 will be the high pressure. Note: if the temperature or pressure matches one in the charts you do not need to do an adjustment for that chart.

**Temperature Factor Calculation**

_____ c	Actual Temp
- _____ c	Temp 1
= _____ c	X 10 = _____ %
	Temperature Factor

**Pressure Altitude Factor Calculation**

_____	Actual Pressure Altitude
- _____	Pressure Altitude 1
= _____	X 0.1 = _____ %
	Pressure Alt Factor

**Temperature Adjustment**

Cessna	Chart Pressure Altitude 1 = _____ ft
	Ground Roll                      Total To Clear 50 ft Obstacle
Temp 2 _____ Distances	_____
Temp 1 _____ Distances	- _____
Difference	= _____
Temperature Factor X _____ %	X _____ %
	= _____
Temp 1 Distances + _____	+ _____
<b>Adjusted Distances</b> A1 = _____	A2 = _____

Chart Pressure Altitude 2 = _____ ft
Ground Roll                      Total To Clear 50 ft Obstacle
_____
- _____
= _____
X _____ %
X _____ %
= _____
+ _____
+ _____
B1 = _____
B2 = _____

**Pressure Altitude and Wind Adjustment**

Temp Adjusted Distances	B1 _____	B2 _____
Temp Adjusted Distances	A1 - _____	A2 - _____
Difference	= _____	= _____
Pressure Alt. Factor X _____ %	X _____ %	X _____ %
	= _____	= _____
Temp Adjusted Distances + A1 _____	+ A2 _____	
<b>Adjusted Distances</b> = _____	= _____	
Subtract Headwind Factor - _____ %	- _____ %	
	= _____	= _____

**Grass Runway Adjustment**

Ground Roll Distance	_____
	X 45 %
Grass Adjustment	= _____
Ground Roll Distance	_____
Grass Adjustment	+ _____
<b>Final Ground Roll Distance</b>	= _____
Total To Clear 50 Feet	_____
Grass Adjustment	+ _____
<b>Final Total to Clear 50 ft</b>	= _____

**Caution:**

Add Tailwind Factor - Max 50%