Airbus A 318

If the pilot increases the engine thrust by 20%. Calculate the initial acceleration and the final velocity. The drag coefficient - C_D is constant.

Mass (Take-off weight)	68t
Wing area	122,4 m^2
Drag coefficient C_D	0,140
Speed	210 km/hour
ρ density of air	1,225 kg/m^3

$$D = \frac{1}{2} \rho v^2 S C_D$$

When the engine thrust is increased by 20%:

$$T_2 - D_1 = m a$$

Airbus A 319

If the pilot increases the engine thrust by 20%. Calculate the initial acceleration and the final velocity. The drag coefficient - C_D is constant.

Mass (Take-off weight)	75,5t
Wing area	122,4 m^2
Drag coefficient C_D	0,180
Speed	210 km/hour
ρ density of air	1,225 kg/m^3

$$D = \frac{1}{2} \rho v^2 S C_D$$

When the engine thrust is increased by 20%:

$$T_2 - D_1 = m a$$

Airbus A 320

If the pilot increases the engine thrust by 20%. Calculate the initial acceleration and the final velocity. The drag coefficient - C_D is constant.

Mass (Take-off weight)	78t
Wing area	122,4 m^2
Drag coefficient C_D	0,180
Speed	210 km/hour
ρ density of air	1,225 kg/m^3

$$D = \frac{1}{2} \rho v^2 S C_D$$

When the engine thrust is increased by 20%:

$$T_2 - D_1 = m a$$

Airbus A 321

If the pilot increases the engine thrust by 20%. Calculate the initial acceleration and the final velocity. The drag coefficient - C_D is constant.

Mass (Take-off weight)	93,5t
Wing area	122,4 m^2
Drag coefficient C_D	0,200
Speed	210 km/hour
ρ density of air	1,225 kg/m^3

$$D = \frac{1}{2} \rho v^2 S C_D$$

When the engine thrust is increased by 20%:

$$T_2 - D_1 = m a$$

Airbus A 318

If the pilot increases the engine thrust by 20%. Calculate the initial acceleration and the final velocity. The drag coefficient - C_D is constant.

Mass (Take-off weight)	68t
Wing area	122,4 m^2
Drag coefficient C_D	0,140
Speed	210 km/hour
ρ density of air	1,225 kg/m^3

$$D = \frac{1}{2} \rho v^2 S C_D$$

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Airbus A 319

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When the engine thrust is increased by 20%:

$$T_2 - D_1 = m a$$

Aircraft Tu-154M

If the pilot increases the engine thrust by 20%. Calculate the initial acceleration and the final velocity. The drag coefficient - C_D is constant.

Mass (Take-off weight)	102 t
Wing area	201.5 m^2
Drag coefficient C_D	0,140
Speed	210 km/hour
ρ density of air	1,225 kg/m^3

$$D = \frac{1}{2} \rho v^2 S C_D$$

When the engine thrust is increased by 20%:

$$T_2 - D_1 = m a$$

Boeing 737 classic

If the pilot increases the engine thrust by 20%. Calculate the initial acceleration and the final velocity. The drag coefficient - C_D is constant.

Mass (Take-off weight)	85,1 t
Wing area	124.58 m^2
Drag coefficient C_D	0,140
Speed	210 km/hour
ρ density of air	1,225 kg/m^3

$$D = \frac{1}{2} \rho v^2 S C_D$$

When the engine thrust is increased by 20%:

$$T_2 - D_1 = m a$$

AircraftTu-154B-2

If the pilot increases the engine thrust by 20%. Calculate the initial acceleration and the final velocity. The drag coefficient - C_D is constant.

Mass (Take-off weight)	102 t
Wing area	$201.5m^2$
Drag coefficient C_D	0,140
Speed	210 km/hour
ρ density of air	1,225 kg/m^3

$$D = \frac{1}{2}\,\rho\, v^2\, S\, C_D$$

When the engine thrust is increased by 20%:

$$T_2 - D_1 = m\, a$$

Aircraft Tu -154M

If the pilot increases the engine thrust by 20%. Calculate the initial acceleration and the final velocity. The drag coefficient - C_D is constant.

Mass (Take-off weight)	85.1t
Wing area	$124.58m^2$
Drag coefficient C_D	0.140
Speed	210 km/hour
ρ density of air	1.225 kg/m^3

$$D = \frac{1}{2}\,\rho\, v^2\, S\, C_D$$

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Wing area	124.58 m^2
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Speed	210 km/hour
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$$D = \frac{1}{2} \rho v^2 S C_D$$

When the engine thrust is increased by 20%:

$$T_2 - D_1 = m a$$

Boeing 747-300

If the pilot increases the engine thrust by 20%. Calculate the initial acceleration and the final velocity. The drag coefficient - C_D is constant.

Mass (Take-off weight)	378,000 kg
Wing area	511 m^2
Drag coefficient C_D	0,110
Speed	210 km/hour
ρ density of air	1,225 kg/m^3

$$D = \frac{1}{2} \rho v^2 S C_D$$

When the engine thrust is increased by 20%:

$$T_2 - D_1 = m a$$

Boeing 737 classic

If the pilot increases the engine thrust by 20%. Calculate the initial acceleration and the final velocity. The drag coefficient - C_D is constant.

Mass (Take-off weight)	102t
Wing area	$124.58m^2$
Drag coefficient C_D	0,140
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