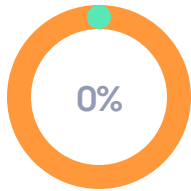


Don't give up now! Trust the process.

Your time: 1 min



Correct

0

Incorrect

30

Next steps

30 missed terms

Practice terms in Learn

Practice your missed terms more until you get them right.



Take a new test

Try another test to boost your confidence.



Your answers

1 of 30

Definition 

How does total temperature vary cross a normal shock wave?

Give this one a try later!

 Skipped

Correct answer

constant

2 of 30

Definition

Oblique shock relations are basically the same as those for a normal shock except M_1 is replaced by __

Give this one a try later!

Skipped

Correct answer M_{n1}

3 of 30

Definition

How does entropy vary across an oblique shock wave

Give this one a try later!

✕ Skipped

Correct answer

✓ Up

4 of 30

Definition 🔊

How does static temp vary across a P-M wave?

Give this one a try later!

✕ Skipped

Correct answer

✓ down

5 of 30

Definition 

What is the quickest way to determine p_{o2}/p_{o1} across an oblique shock

Give this one a try later!

 Skipped

Correct answer

 T.A.2

6 of 30

Definition 

Can we analytically determine T_2/T_1 across an oblique shock

Give this one a try later!

 Skipped

Correct answer

Yes

7 of 30

Definition

How does entropy vary across a normal shock wave?

Give this one a try later!



Skipped

Correct answer

up

8 of 30

Definition

Turning a supersonic flow "away from" itself will produce a __ wave

Give this one a try later!

✕ Skipped

Correct answer

✓ P-M

9 of 30

Definition 🔊

How does enthalpy vary across a P-M wave

Give this one a try later!

✕ Skipped

Correct answer

✓ constant

Definition 

Write the mass conservation equation for 1-D flow in its simplest form

Give this one a try later!

 Skipped

Correct answer

 $\rho_1 u_1 = \rho_2 u_2$

Definition 

Turning a supersonic flow "into" itself usually produces a(n) ____

Give this one a try later!

 Skipped

Correct answer

Oblique Shockwave

12 of 30

Definition

How does entropy vary across a bow shock wave

Give this one a try later!



Skipped

Correct answer

increases

13 of 30

Definition

Write the mass conservation equation for a Q-1-D flow

Give this one a try later!

✕ Skipped

Correct answer

✓ $\rho_1 u_1 A_1 = \rho_2 u_2 A_2$

14 of 30

Definition 🔊

At the exit of a nozzle, for "under-expanded" flow, we observe the presence of ___

Give this one a try later!

✕ Skipped

Correct answer

✓ P-M waves

15 of 30

Definition 

Total ___ remains constant across a bow shock.

Give this one a try later!

 Skipped

Correct answer

 Temperature

16 of 30

Definition 

Give the equation for calculating the Mach angle μ for the free stream

Give this one a try later!

 Skipped

Correct answer $\mu_{\text{inf}} = \text{asin}(1/M_{\text{inf}})$

17 of 30

Definition

Does static pressure increase across an oblique shock?

Give this one a try later!



Skipped

Correct answer

Yes

18 of 30

Definition

How does static pressure vary across a P-M expansion wave?

Give this one a try later!

✕ Skipped

Correct answer

✓ Down

19 of 30

Definition 🔊

Does static temperature increase across an oblique shock?

Give this one a try later!

✕ Skipped

Correct answer

✓ Yes

20 of 30

Definition 

How does total pressure change across a P-M wave?

Give this one a try later!

 Skipped

Correct answer

 Constant

21 of 30

Definition 

Beyond this flow deflection angle ____, we get a bow shock wave

Give this one a try later!

 Skipped

Correct answer

Theta_max

22 of 30

Definition

How does total pressure vary across a bow shock?

Give this one a try later!



Skipped

Correct answer

Down

23 of 30

Definition

Total ____ drops across a bow show wave

Give this one a try later!

✕ Skipped

Correct answer

✓ Pressure

24 of 30

Definition 

Turning a supersonic flow "into" itself will produce a/an ____ wave

Give this one a try later!

✕ Skipped

Correct answer

✓ oblique shock

25 of 30

Definition 

The best example of a "____" is the normal shock wave

Give this one a try later!

 Skipped

Correct answer

 Strong

26 of 30

Definition 

Oblique shock relations are basically the same as those for a normal shock except M_1 is replaced by M_{n1}

Give this one a try later!

 Skipped

Correct answer

Normal

27 of 30

Definition

Can we analytically find M_2 and M_1 for a normal shock wave

Give this one a try later!



Skipped

Correct answer

yes

28 of 30

Definition

Can we analytically solve the theta-beta-M relation for M

Give this one a try later!

✕ Skipped

Correct answer

✓ Yes

29 of 30

Definition 🔊

In a liquid rocket engine, at full throttle, M at the exit is always

Give this one a try later!

✕ Skipped

Correct answer

✓ Supersonic

Definition 

Can we analytically determine p_2/p_1 across an oblique shock

Give this one a try later!

 Skipped

Correct answer

 yes