The background features a gradient from red at the top to blue at the bottom, overlaid with faint, semi-transparent circular gauges and progress indicators. Some gauges have numerical scales, such as 40, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, and 260. The text is centered in a bold, white, sans-serif font.

# SPEED, DISTANCE, TIME, VELOCITY, AND ACCELERATION QUIZ REVIEW

# QUESTION #1

Write down the equations for:

- Speed
- Distance
- Time

ANSWER

## Formulas

$\text{Speed} = \text{Distance} / \text{Time}$

$\text{Distance} = \text{Speed} \times \text{Time}$

$\text{Time} = \text{Distance} / \text{speed}$

# QUESTION 2

Define: Motion



ANSWER

Motion- A change in position, over time, relative to a reference point.

# QUESTION 3

Define: Speed



ANSWER

The distance an object moves in an amount of time.

# QUESTION 4

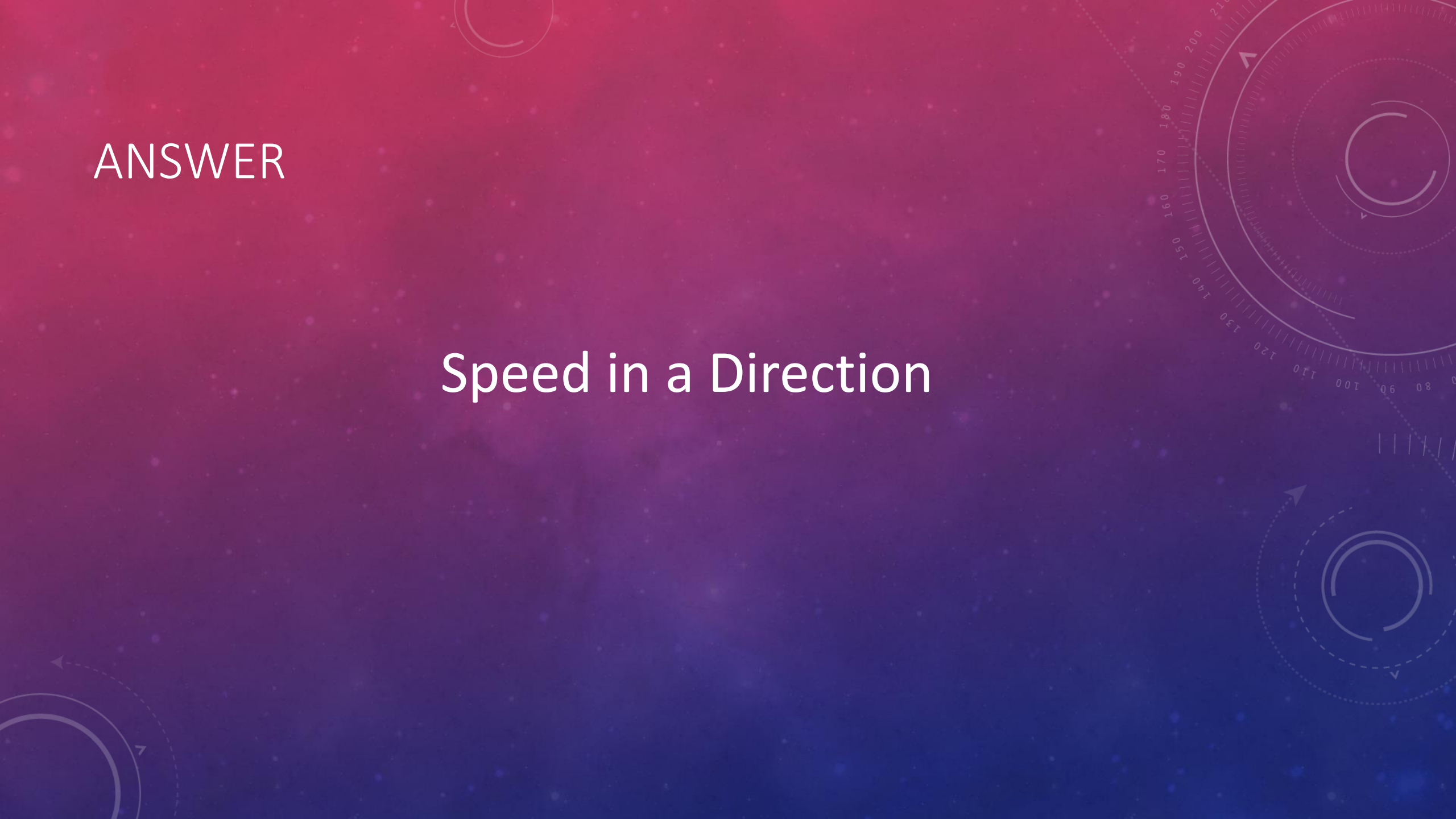
Define: Velocity





ANSWER

Speed in a Direction



# QUESTION 5

Define: Acceleration

ANSWER

Acceleration: Change in Velocity/ Speed over time.

# QUESTION 6

Calculate the speed of Charlie who runs to the store 4 Km away in 30 minutes?

ANSWER

.13 km/min



# QUESTION 7

A bicycle rider travels 50.0 Km in 2.5 hours. What is the cyclist's speed?

ANSWER

20 km/hr

# QUESTION 8

An ant traveled 30 seconds at a speed of .5 ft./s.  
How far did the ant travel?



ANSWER

15 feet

# QUESTION 9

How much time would it take for an airplane to reach its destination if it traveled at an average speed of 790 Km/hr for a distance of 5000 kilometers?

ANSWER

6.33 Hours

# QUESTION 10

A student rides her bike to school. Her school is 5 miles from home. She travels at an average rate of 15 miles per hour. How much time does she need?

ANSWER

.33 hour or 19.8 minutes

# QUESTION 11

A rocket can travel at an average rate of 18,000 miles per hour. How far will the rocket travel in 4.5 hours?

ANSWER

81,000 miles

# QUESTION 12

A man rode on his motorcycle for 162 miles. His average speed was 45 miles per hour. How long did his trip take?



ANSWER

3.6 hours

# QUESTION 13

A train's average speed is 120km per hour. Its elapsed time is 2 hr. How far did it travel?

ANSWER

240 km

# QUESTION 14

Suppose it takes a plane 5 hours to travel from Philadelphia to San Francisco. It travels at an average speed of 500 miles per hour. What is the distance between the two cities?

ANSWER

2,500 miles

# QUESTION 15

Write the equation for acceleration:

ANSWER

Acceleration Formula:

$$\frac{\text{Final Velocity} - \text{Initial Velocity}}{\text{Time}}$$

# QUESTION 16

A car is moving from rest and attained a velocity of 80 m/s. Calculate the acceleration of the car after 5 s?



ANSWER

$16 \text{ m/s}^2$

# QUESTION 17

Determine the acceleration of a coaster which moves with a velocity of  $10 \text{ m/s}$ , after  $2\text{s}$  its velocity is increases to  $26 \text{ m/s}$ .

ANSWER

$$8 \text{ m/s}^2$$

# QUESTION 18

A roller coaster car rapidly picks up speed as it rolls down a slope. As it starts down the slope, its speed is 4 m/s. But 3 seconds later, at the bottom of the slope, its speed is 22 m/s. What is its average acceleration?

ANSWER

$6 \text{ m/s}^2$

# QUESTION 19

A lizard accelerates from 2 m/s to 10 m/s in 4 seconds. What is the lizard's acceleration?

ANSWER

$$2 \text{ m/s}^2$$

# QUESTION 20

A ball is dropped from the top of a building. After 2 seconds, it's velocity is measured to be 19.6 m/s. Calculate the acceleration for the dropped ball.



ANSWER

9.8 m/s<sup>2</sup>