

## Launch Conditions (Review Guide)

- 1** An object will be launched at a velocity of 28 meters/sec<sup>2</sup>. What is the maximum height of this object if launched at 75°?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

- 2** An object will be launched at a velocity of 28 meters/sec<sup>2</sup>. What is the maximum range of this object if launched at 75°?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

- 3** An object will be launched at a velocity of 11.5 meters/sec<sup>2</sup>. What is the maximum height of this object if launched at 45°?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

- 4** An object will be launched at a velocity of 11.5 meters/sec<sup>2</sup>. What is the maximum range of this object if launched at 45°?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

- 5 An object will be launched at a velocity of  $18.25 \text{ meters/sec}^2$ . Which of the following launch angles will result in the greatest range?
- A 39.5
  - B 45
  - C 51.5
  - D 90
- 6 An object will be launched at a velocity of  $18.25 \text{ meters/sec}^2$ . Which of the following launch angles will result in the least range?
- A 39.5
  - B 45
  - C 51.5
  - D 90
- 7 An object will be launched at a velocity of  $18.25 \text{ meters/sec}^2$ . Which two of the following launch angles will result in the same range?
- A 35
  - B 40
  - C 50
  - D 65
- 8 What is the velocity of an object that is launched at an angle of  $22.5^\circ$  and achieves a maximum height of 38 meters?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

- 9** What is the velocity of an object that is launched at an angle of  $89^\circ$  and achieves a maximum height of 215 meters?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

- 10** What is the velocity of an object that is launched at an angle of  $40^\circ$  and achieves a maximum range of 36.576 meters (40 yards)?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

- 11** What is the velocity of an object that is launched at an angle of  $40^\circ$  and achieves a maximum range of 45.72 meters (50 yards)?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

- 12** What is the velocity of an object that is launched at an angle of  $40^\circ$  and achieves a maximum range of 18.288 meters (20 yards)?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

- 13** An object is launched at a velocity of 28 meters/sec<sup>2</sup> and achieves a height of 40 meters. What angle was it launched at?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

- 14** An object is launched at a velocity of 18 meters/sec<sup>2</sup> and achieves a height of 10 meters. What angle was it launched at?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

- 15** An object is launched at a velocity of 31.5 meters/sec<sup>2</sup> and achieves a height of 1 meter. What angle was it launched at?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

- 16** An object is accelerated to 22 meters/sec<sup>2</sup> at launch and reaches a range of 18.288 meters (20 yards). What angle was it launched at?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

- 17** An object is accelerated to  $22 \text{ meters/sec}^2$  at launch and reaches a range of 36.576 meters (40 yards). What angle was it launched at?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

- 18** An object is accelerated to  $22 \text{ meters/sec}^2$  at launch and reaches a range of 45.72 meters (50 yards). What angle was it launched at?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

- 19** As the launch angle of a projectile is raised above  $45^\circ$ , the range decreases.

- A** Generally True
- B** Generally False

- 20** In the water balloon project you will be working on, which vector quantity are we the most interested in?

- A** Range
- B** Height