

# Powerprep Plus 2 Quant Set 1 Answers

Shayesteh.ir

1) A

SET 1

Correct rate: 90%

Difficulty: easy

$$\begin{aligned} 0 < x < y < 1, \quad QA: x - y, \quad QB: (x - y)^2 \\ (x, y) = (0.1, 0.9), \quad QA = 0.09, \quad QB = 0.64 \\ (x, y) = (0.4, 0.5), \quad QA = 0.2, \quad QB = 0.01 \end{aligned}$$

2) A

SET 1

Correct rate: 83%

Difficulty: easy

3) A

SET 1

Correct rate: 89%

Difficulty: easy

$$\text{Average} = \frac{8 \times 180 + 10 \times 160 + 12 \times 200}{180 + 160 + 200} = \frac{5440}{540} = 10.074$$

4) D

SET 1

Correct rate: 92%

Difficulty: easy

$$2x + cy = 10 \Rightarrow -6x - 3cy = -30$$

$$6x + 2cy = 40$$

$$\Rightarrow -cy = 10 \Rightarrow c = \frac{10}{-y}$$

5) A

SET 1

Correct rate: 75%

Difficulty: easy

$$\text{Average} = \frac{q + r + s + t + u + v}{6} = \frac{q}{6} + \frac{r}{6} + \frac{s}{6} + \frac{t}{6} + \frac{u}{6} + \frac{v}{6} = 36$$

6) C

SET 1

Correct rate: 95%

Difficulty: easy

$$(180^\circ - x^\circ) + (180^\circ - y^\circ) + (180^\circ - z^\circ) = 180^\circ$$

$$(x^\circ) + (y^\circ) + (z^\circ) = 360^\circ$$

7) C

SET 1

Correct rate: 82%

Difficulty: easy

$$21 + 15 - 6 = 30$$



8) D

SET 1

Correct rate: 86%

Difficulty: easy

$$x = 1, y = -6$$

$$x = 3, y = -4$$

$$x = 5, y = 4$$

9) 60

SET 1

Correct rate: 91%

Difficulty: easy

$$\frac{z}{y} = 30\%$$

$$\frac{x}{y} = 50\%$$

$$\Rightarrow \frac{\frac{z}{y}}{\frac{x}{y}} = \frac{30\%}{50\%} \Rightarrow \frac{z}{x} = \frac{3}{5} = \frac{60}{100} = 60\%$$

10) D

SET 1

Correct rate: 82%

Difficulty: easy

$$360 = \frac{36,000 \times R\% \times 1}{12} \Rightarrow R = 12\%$$

11) B

SET 1

Correct rate: 82%

Difficulty: easy

$$\frac{5}{9}(86 - 74) = 6.66 \cong 7$$

12)B

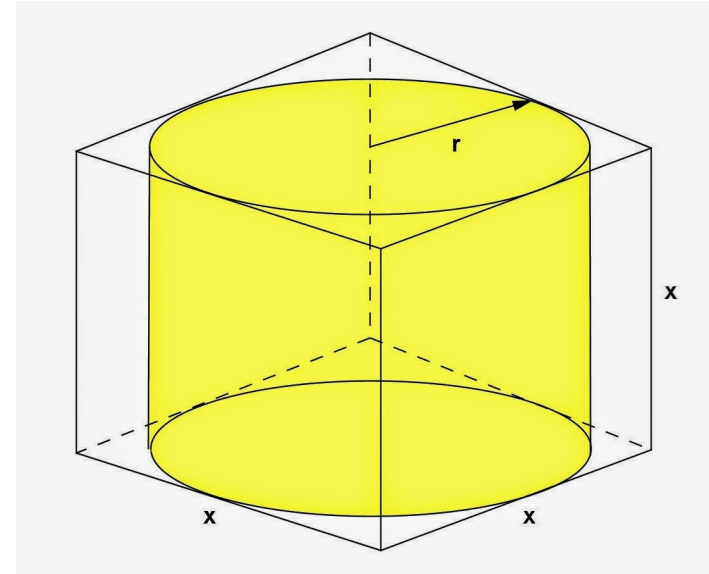
SET 1

Correct rate: 85%

Difficulty: easy

$$V_{cube} = 64 = x^3 \Rightarrow x = h = 4 \Rightarrow r = 2$$

$$V_{cylinder} = \pi r^2 \times h = \pi \times 2^2 \times 4 \Rightarrow V_{cylinder} \cong 50$$



13) A, B

SET 1

Correct rate: 88%

Difficulty: easy

*The median of 25 people =  $(25 + 1)/2 = 13$   
So just consider the range of 80~89*

<https://www.shuxuele.com/data/frequency-grouped-mean-median-mode.html>

14)D

SET 1

Correct rate: 81%

Difficulty: easy

$$\frac{46\%}{16\%} = 2.875 \cong 3$$

15) 7

SET 1

Correct rate: 68%

Difficulty: easy

$$39\% \times 41 = 15.99$$

$$\frac{15.99}{241} = 0.066 \cong 7\%$$



16) E

SET 1

Correct rate: 74%

Difficulty: easy

$$\frac{107 \times 46\% - 93 \times 33\%}{93 \times 33\%} \cong 60\%$$

17) 33

SET 1

Correct rate: 87%

Difficulty: easy

$$48\% - 15\% = 33\%$$

18) D

SET 1

Correct rate: 64%

Difficulty: easy

$$r_y = \frac{1}{12} \times 24\pi$$

$$\text{Circumference Circle } Y = 2\pi r_y = 2\pi \times \frac{1}{12} \times 24\pi = 4\pi^2$$

19) E

SET 1

Correct rate: 92%

Difficulty: easy

$$\frac{1}{1 + \frac{1}{t + \frac{1}{t}}} = \frac{1}{1 + \frac{1}{\frac{t^2 + 1}{t}}} = \frac{1}{1 + \frac{t}{t^2 + 1}} = \frac{1}{\frac{t^2 + t + 1}{t^2 + 1}} = \frac{t^2 + 1}{t^2 + t + 1}$$

20)A

SET 1

Correct rate: 78%

Difficulty: easy

*if we consider these numbers integers*

$x = 6, 7, 8$  or  $x = -8, -7, -6$

$y = 1, 2$  or  $y = -1, -2$

$z = 3, 4$  or  $z = -4, -3$

*we can get 0:*  $x = -6, y = 2, z = 4$

or  $x = 6, y = -2, z = -4$

# Thanks