

# Powerprep Plus 3 Quant Set 2 Answers

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1) A

SET 2

Correct rate: 96%

Difficulty: easy

*Assuming there are  $x$  students in total, the number of green eyes can be expressed as*

$$\left(\frac{1}{4}\right) \times \left(x - \frac{1}{3}x\right) = \frac{2}{12}x$$

*according to the question stem information*

Think of 12 student!!!

2) C

SET 2

Correct rate: 76%

Difficulty: easy

Regardless of whether it contains or does not contain, it is a continuous number anyway, so average = median

3) A

SET 2

Correct rate: 96%

Difficulty: easy

*Square surface:*  $10 \times 10 = 100$

*cube surface:*  $4 \times 4 \times 6 = 96$

4) A

SET 2

Correct rate: 93%

Difficulty: easy

$$n^2 + 2n = (n + 1)^2 - 1$$

*that the result is even indicates that n is even and bigger than 1*

5) A

SET 2

Correct rate: 96%

Difficulty: easy

$$\textit{Perimeter } ABC = 1 + 1 + \sqrt{2} \cong 3.4$$

$$\textit{Perimeter } PQR = 1 + 1 + 1 = 3$$

6) C

SET 2

Correct rate: 95%

Difficulty: easy

$$A = \sqrt{(-5 - (-2))^2 + (-3 - (-5))^2} = \sqrt{13}$$

$$B = \sqrt{(3 - 6)^2 + (4 - 2)^2} = \sqrt{13}$$

7) D

SET 2

Correct rate: 94%

Difficulty: easy

$$x = \frac{1}{2}$$

$$x = 1$$

$$x = 2$$



8) D

SET 2

Correct rate: 87%

Difficulty: easy

$$\text{hour earn} = 240 \times 4 = 960$$

$$\text{commission earn} = 10\% \times 40,400 = 4,040$$

$$\frac{4,040}{960 + 4,040} = 80.8\%$$

9) D

SET 2

Correct rate: 93%

Difficulty: easy

$$\frac{65 - 35}{0.62} \cong 48$$

10) 7

SET 2

Correct rate: 85%

Difficulty: easy

*Quickly calculate  $4 < a < 8$ ,  
 $a = 5, 6, 7$  from the inequality.  
 $2a + 4 < a^2 - 20$ , we get  $(a - 6)(a + 4) > 0$ ,  
then  $a \neq 6$ , otherwise the inequality = 0;  
then  $a \neq 5$ , the inequality is less than 0, Only 7 left.*

11) B

SET 2

Correct rate: 93%

Difficulty: easy

$$\frac{360}{72,000} \times 12 = 6\%$$

12) D

SET 2

Correct rate: 84%

Difficulty: easy

$$A = a, a + 1, a + 2, a + 3$$

$$B = (a + 2, a + 3, a + 4, a + 5 \& a - 2, a - 1, a, a + 1 \}$$

*Therefore there will never be an overlap.*

13)B

SET 2

Correct rate: 97%

Difficulty: easy

$$M^\circ = 60^\circ$$

$$J = x^\circ = 360 - 90 - 90 - M^\circ = 120^\circ$$

# 14)B

## SET 2

Correct rate: 76%

Difficulty: easy

*The increase is greater than or equal to 50%, that is, greater than or equal to 1.5.  
So the first column multiplied by 1.5, which is more than the second column, is the correct option.  
It can be done in 50 seconds.*

	2002	2003	
Agriculture	1,098	1,757	1.6
Automobiles	505	414	0.8
Chemical	491	680	1.3
Industrial machinery	219	341	1.55
Metallurgy	738	1,091	1.47
Raw materials	1029	1,646	1.59
Texriles	429	307	0.7

15) D

SET 2

Correct rate: 94%

Difficulty: easy

$$\frac{6,236 - 4,509}{4,509} = \frac{1727}{4,509} \cong 40\%$$



16)571

SET 2

Correct rate: 82%

Difficulty: easy

In year 2002, max-min value =  $1098 - 219 = 879$

In year 2003, max-min value =  $1757 - 307 = 1450$

How much increase in range is  $1450 - 879 = 571$

17) D

SET 2

Correct rate: 88%

Difficulty: easy

n, could be 15, 25, 35.....95, if  $n = 25$ ,  $m = 6$

18) B

SET 2

Correct rate: 80%

Difficulty: easy

19) D

SET 2

Correct rate: 79%

Difficulty: easy

The more dispersed, the greater the standard deviation

$$A = \sqrt{20^2 + 10^2 + 0^2 + 10^2 + 20^2}$$

$$B = \sqrt{20^2 + 0^2 + 0^2 + 0^2 + 20^2}$$

$$C = \sqrt{20^2 + 5^2 + 0^2 + 5^2 + 20^2}$$

$$D = \sqrt{20^2 + 20^2 + 0^2 + 20^2 + 20^2}$$

$$E = \sqrt{10^2 + 10^2 + 0^2 + 10^2 + 10^2}$$

## 20) B,D,E      SET 2

Correct rate: 74%

Difficulty: easy

$$50 - 50 \times \frac{p}{100} = \textit{discounted price} = k + 20$$

$$\Rightarrow 30 - \frac{p}{2} = k$$

$$\Rightarrow 60 - p = 2k$$

$$\Rightarrow 60 = 2k + p$$

# Thanks