

Powerprep Plus 2 Quant Set 3 Answers

Shayesteh.ir

1) D

SET 3

Correct rate: 93%

Difficulty: medium

2, -2

2) B

SET 3

Correct rate: 93%

Difficulty: medium

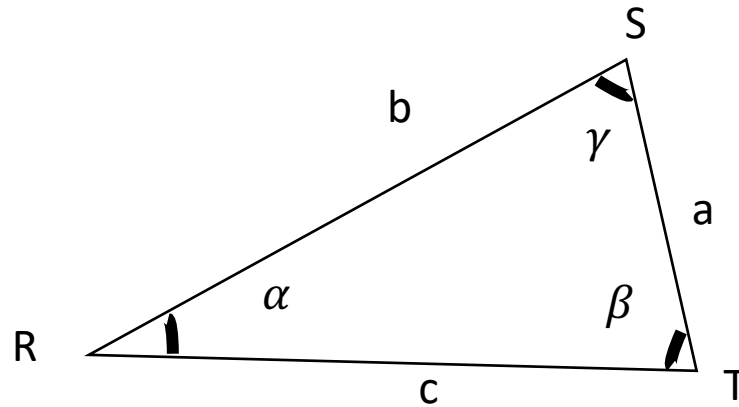
$$\frac{40}{18 \times 1.15} = \frac{40}{20.7} = 1.93$$

3) B

SET 3

Correct rate: 88%

Difficulty: medium



$$\frac{\sin \alpha}{a} = \frac{\sin \beta}{b} = \frac{\sin \gamma}{c} \Rightarrow \frac{\sin 58}{RS} = \frac{\sin 52}{RT} = \frac{\sin(180 - 52 - 58)}{ST} \Rightarrow \sin 70 > \sin 58 \Rightarrow ST > RS$$

4) B

SET 3

Correct rate: 80%

Difficulty: medium

$$R_x < (30 - 15)$$

$$R_y < (30 - 15)$$

$$R_z < (30 - 15)$$

5) A

SET 3

Correct rate: 69%

Difficulty: medium

$$A: \left(\frac{y^3}{\sqrt{x}} \right)$$

$$B: \left(\frac{x^3}{\sqrt{y}} \right)$$

$$\frac{A}{B} = \frac{\frac{y^3}{\sqrt{x}}}{\frac{x^3}{\sqrt{y}}} = \frac{y^3}{x^3} \cdot \frac{\sqrt{y}}{\sqrt{x}} = \frac{y^3 \sqrt{y}}{x^3 \sqrt{x}} = \frac{y^{\frac{7}{2}}}{x^{\frac{7}{2}}} = \left(\frac{y}{x} \right)^{\frac{7}{2}}$$

$$0 < x < y < 1 \Rightarrow \frac{y}{x} > 1 \Rightarrow \frac{A}{B} > 1 \Rightarrow A > B$$

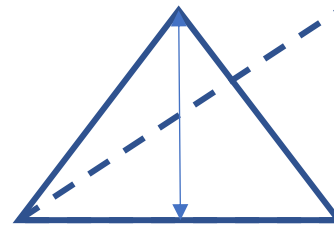
6) D

SET 3

Correct rate: 91%

Difficulty: medium

$$A = \frac{1}{2} \times (4 - (-2)) \times h = 24 \Rightarrow h = 8$$



7) D

SET 3

Correct rate: 85%

Difficulty: medium

It can be determined that $y < 0$, but whether x is less than 0 is uncertain, resulting in uncertain whether xy^2 is greater than 0, choose D

8) E

SET 3

Correct rate: 87%

Difficulty: medium

Possible Outcomes of (Days): 5, 10, 15, 20, 25, 30 (6 ways);

Possible outcomes of (Months): 5, 10 (2 ways);

Possible outcomes of (Year): 2010 (1 Way)

*Fundamental Counting Principal: $6 * 2 * 1 = 12$*

9) C

SET 3

Correct rate: 93%

Difficulty: medium

$$\text{Average}_2 = \frac{18 + 27 + 30}{3} = 25$$

$$\text{Average}_1 = 25 + 2 = 27 = \frac{(x - 1) + x + (x + 1)}{3} \Rightarrow x = 27 \Rightarrow x + 1 = 28$$

10) A

SET 3

Correct rate: 82%

Difficulty: medium

Let red: 1, blue: 2, green: 1

number of red marbles in the bag divided by the total number of marbles = $1/4$

11) C

SET 3

Correct rate: 96%

Difficulty: medium

$$r_1 = 6$$

$$r_{12} = 12$$

$$\frac{A_1}{A_2} = \frac{r_1^2}{r_2^2} = \frac{1}{4}$$

12) A

SET 3

Correct rate: 92%

Difficulty: medium

$$\text{Eq } (y - 4) = \frac{1}{2}(x - 0)$$

Putting $y = 0$, for x intercept, we get $x = -8$

13) B

SET 3

Correct rate: 95%

Difficulty: medium

$$\frac{n}{4} + \frac{n}{2} = \frac{3n}{4} \text{ in } 60 \text{ min}$$

$$\frac{3n}{4} \times 40 \text{ min} \div 60 \text{ min} = \frac{n}{2}$$

14) C

SET 3

Correct rate: 99%

Difficulty: medium

$$(18.7\% - 9\%) \times 2,000 = 194$$

15) A

SET 3

Correct rate: 96%

Difficulty: medium

$$16\% + 9\% = 25\% = \frac{1}{4}$$

16) B

SET 3

Correct rate: 80%

Difficulty: medium

$$16\% \times 2,000 = 320$$

17) A

SET 3

Correct rate: 90%

Difficulty: medium

18) 12

SET 3

Correct rate: 76%

Difficulty: medium

$$\left[\frac{100}{7} \right] = 14$$

$$\left[\frac{100}{6 \times 7} \right] = 2$$

$$\text{total } 14 - 2 = 12$$

19) B

SET 3

Correct rate: 84%

Difficulty: medium

$$\frac{1}{2} < x < \frac{3}{4}$$

$$\frac{2}{7} < y < \frac{4}{7}$$

$$\frac{1}{7} < xy < \frac{3}{7}$$

20) A,C,E SET 3

Correct rate: 65%

Difficulty: medium

$$g(1) = r - s + t = 0$$

Thanks