Powerprep Plus 1 Quant Set 3 Answers

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SET 3

For
$-1\ to\ be\ one\ r^2\ should\ be\ Even. Only\ 2\ and\ 4\ satisfy\ that. For\ A$
$=\ 2/6 = 1/3.$
$1/3 < 1/2.$

SET 3

$y = 1, z = 2, Quantity\ A > Quantity\ B$

$y = 2, z = 4, Quantity\ A > Quantity\ B$

$y = 0, z = 0, Quantity\ A > Quantity\ B$

$y = -1, z = -2, QA\ =\ 0\ QB\ =\ -1/8\ Quantity\ A >\ Quantity\ B$

$y = -2, z = -4, QA =\ -1/4\ QB\ =\ -3/8\ Quantity\ A >\ Quantity\ B$

SET 3

Correct rate: 85%

Difficulty: medium

$$A = \frac{\sqrt[3]{6^2}}{\sqrt[3]{6^2}}\left(\frac{5}{\sqrt[3]{6}}\right) = \frac{5\sqrt[3]{6^2}}{6}$$

$$B = \frac{5\sqrt[3]{6}}{6}$$

SET 3

$Min\ Area\ of\ Square = 3{\times}4 = 12$

$Max\ Area\ of\ Square = \infty$

$Area\ of\ circle = 2\pi r = 2{\times}3.14{\times}3 = 18.84$

$$\frac{PW}{PR} = \frac{PQ}{QT} \Longrightarrow \frac{x}{12+15} = \frac{12}{x} \Longrightarrow x = 18$$

6) B

Correct rate: 83%   Difficulty: medium

$$10{,}000 + \frac{x}{100} \times 10{,}000 = 10{,}000 + 100x = 10{,}000 + 100 \times \frac{3y}{4} = 10{,}000 + 75y$$

$$8{,}000 + \frac{y}{100} \times 8{,}000 = 8{,}000 + 80y$$

$$75y < 80y$$

$$m = \frac{s - u}{r - t}$$

12.6, 12.6, 14.6, 14.6, 16.0, 16.2, 16.2, 16.3, 17.7, 17.8

$$median = \frac{16.0 + 16.2}{2} = 16.1$$

$$C = \frac{40}{100}D$$

$C = 0.4D \implies D = 0.25C$

$C > 800 \implies 0.25 \times C > 800 \quad 0.25D \implies D > 2000$

$98 <= units <= 102$

$98{\times}0.82 + 50 <= packed\ box <= 102{\times}0.82 + 50$

$130.36 <= packed\ box <= 133.64$

11) B

Correct rate: 86%   Difficulty: medium

$s = 5k$
$t = 5m$
$A) s - t = 5(k - m)$
$B) s + t = 5(k + m)$
$C) st = 25(km)$
$D) s^2 - t^2 = (s - t)(s + t) = 25(k^2 - m^2)$
$E) s^2 + t^2 = 25(k^2 + m^2)$

SET 3

The perimeters of rectangular regions X=28=$8 + 8 + 6 + 6$

The perimeters of rectangular regions Y=34=$12 + 12 + 5 + 5$

The perimeters of rectangular regions Z=22=$6 + 6 + 5 + 5$

The perimeters=8+6+3+12+5+6+5+6+7+6=64

SET 3

$$ax^2 + bx + c = 0$$

$$\frac{-b}{a} = x_1 + x_2$$

$$\frac{c}{a} = x_1 x_2 = -18 = -6 \times 3$$

$$\frac{1}{3+1} = \frac{1}{4} = 25\%$$

SET 3

Correct rate: 91%   Difficulty: medium

$$\frac{7}{100} = \frac{1.5}{x} \implies x \cong 21 \; billions$$

Range of United States approximately: 3-(-2)=5

Range of European approximately: 1.5-0.1=1.4

5-1.4=3.6

$$\frac{w + x + y + z}{4} = \frac{x + y + z}{3} \Longrightarrow w = \frac{x + y + z}{3}$$

SET 3

Correct rate: 77%   Difficulty: medium

The smallest is $5^3 = 125$, then 6, 7, 8, 9, $10^3 = 1000$, so 5 numbers

SET 3

Correct rate: 92%   Difficulty: medium

$$W_r = 0.75W_t$$

$$L_r = 0.9L_t$$

So, T's Area is xy, R's Area is 0.675xy, then T is 0.325 larger than R, which is 32.5%

A, when X is 1/2, it does not hold.
B, when X is -1/2, it does not hold.
C, but X is positive and negative, both are true.

Thanks