RGS 2023 Y1 Math

Term1 Class Based Assessment Answers

1.

(*a*) $0.0273 \div 0.3$

$= 273 \div 3000$

$= \frac{273}{3000}$

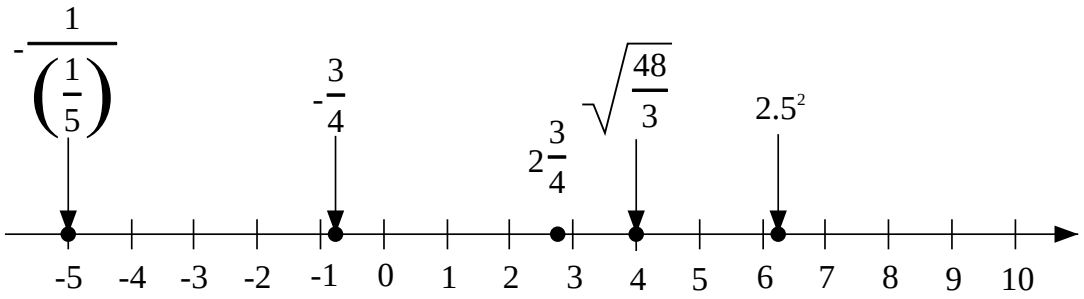
$= \frac{91}{1000}$

(*b*) $2 \times 3 - 4 \div (-5) + (-6)$

$= 6 - (-\frac{4}{5}) - 6$

$= \frac{4}{5}$

2.



3.

$2744 = 2^3 \times 7^3$

$\sqrt[3]{2744}$

$= \sqrt[3]{2^3 \times 7^3}$

$= 2 \times 7$

$= 14$

Radius = $14 \div 2 = 7\text{cm}$

4. (i)

$2\overline{)2482}$

$2\overline{)1242}$

$3\overline{)621}$

$3\overline{)207}$

$3\overline{)69}$

23

$2484 = 2^2 \times 3^3 \times 23$

$\frac{2484}{k} = \frac{2^2 \times 3^3 \times 23}{k}$

Since $\frac{2848}{k}$ is a perfect square,

(ii) $\sqrt{\frac{2484}{k}}$ should be an integer.

$\sqrt{\frac{2484}{k}} = \sqrt{\frac{2^2 \times 3^3 \times 23}{k}} = \sqrt{\frac{2^2 \times 3^3 \times 23}{3 \times 23}} = \sqrt{2^2 \times 3^2} = 2 \times 3 = 6$

$k = 3 \times 23 = 69$

The smallest positive integer of k is 69.

5.

(*a*) $\left[\left(-4^2 + 3\right) + \left(7 - 14\right)\right] \times \left(-2\right)^3$

$= \left[\left(-16 + 3\right) + \left(-7\right)\right] \times \left(-8\right)$

$= \left[\left(-13\right) + \left(-7\right)\right] \times \left(-8\right)$

$= \left(-20\right) \times \left(-8\right)$

$= 160$

(*b*) $\dfrac{\frac{14}{3}\div 3\frac{1}{3}\times\left(-1\frac{1}{9}\right)}{2-(-0.5)^2}$

$=\dfrac{\frac{14}{3}\div\frac{10}{3}\times\left(-\frac{10}{9}\right)}{2-\left(-\frac{1}{2}\right)^2}$

$=\dfrac{\frac{14}{3}\times\frac{3}{10}\times\left(-\frac{10}{9}\right)}{2-\frac{1}{4}}$

$=\dfrac{\left(-\frac{14}{9}\right)}{\frac{7}{4}}$

$=\left(-\frac{14}{9}\right)\div\frac{7}{4}$

$=\left(-\frac{14}{9}\right)\times\frac{4}{7}$

$=-\frac{8}{9}$

6.

$676\times 268-258\times(23+576+77)$

$=676\times 268-258\times(23+77+576)$

$=676\times 268-258\times(100+576)$

$=676\times 268-258\times 676$

$=676\times(268-258)$

$=676\times 10$

$=6760$

Tick the law(s) applied. You may tick more than one.	
√	**Commutative Law of Addition**
	Commutative Law of Multiplication
	Associative Law of Addition
	Associative Law of Multiplication
	Distributive Law of Multiplication over Addition
√	**Distributive Law of Multiplication over Subtraction**

7. To solve this question, we need to find the LCM of 12, 20, and 18. We can use Ladder Method.

$$
\begin{array}{r|l}
2 & 12 \quad 20 \quad 18 \\
\hline
2 & 6 \quad 10 \quad 9 \\
\hline
3 & 3 \quad 5 \quad 9 \\
\hline
 & 1 \quad 5 \quad 3
\end{array}
$$

$\text{LCM} = 2 \times 2 \times 3 \times 1 \times 5 \times 3 = 180$

Thus, it will take 180 hours for all three machines to be checked at the same time.

8. I don't agree with Susan's idea.

Because $\sqrt{35} < \sqrt{36},\ \sqrt{36} = 6$

Thus, $\sqrt{35} < 6$

Because $\sqrt[3]{218} > \sqrt[3]{216}, \sqrt[3]{216} = 6$

Thus, $\sqrt[3]{218} > 6$

Thus, $\sqrt[3]{218} > \sqrt{35}$