

$$12) 2^{-1} - 3^{-1} = \frac{1}{2} - \frac{1}{3} = \frac{3-2}{6} = \frac{1}{6}$$

جاب نهی

$$13) \frac{2^{-1} \times (2^2)^{-2}}{2^5} = \frac{2^{-1} \times 2^{-4}}{2^5} = \frac{2^{-5}}{2^5} = 2^{-5-5} = 2^{-10}$$

$$14) 0.000027 \times 10^{-3} = 2.7 \times 10^{-5} \times 10^{-3} = 2.7 \times 10^{-8}$$

$$15) \frac{2}{\sqrt[3]{128}} = \frac{2}{\sqrt[3]{2^7}} \times \frac{\sqrt[3]{2^2}}{\sqrt[3]{2^2}} = \frac{2 \sqrt[3]{4}}{\sqrt[3]{2^9}} = \frac{2 \sqrt[3]{4}}{2^3} = \frac{\sqrt[3]{4}}{2}$$

$$16) A) (\sqrt{5} - \epsilon)(\sqrt{5} + \epsilon) = 5 + \frac{\epsilon\sqrt{5}}{+} - \frac{\epsilon\sqrt{5}}{-} - 14 = 5 - 14 = -9$$

$$B) \sqrt[3]{2} - \sqrt[3]{14} = \sqrt[3]{2} - \sqrt[3]{2^3 \times 7} = \sqrt[3]{2} - 2\sqrt[3]{2} = -\sqrt[3]{2}$$

حساب نهم

الف ۲ عضوی (ب) $-x$ (ج) 2^5

(الف) درست (ب) نادرست (ج) نادرست

(الف) گزینۀ ۲ (ب) گزینۀ ۳ (ج) گزینۀ ۲

(ع)

$A = \{x \in \mathbb{Z} \mid -5 \leq x \leq 10\}$ $B = \{2, 4, 12, 20, 30\}$

د) $A \cup B = \{-1, 2, 3, 4, 7, 9, -5\}$ $A - (B - C) = \{-1, 2, 4, 7, 9\} - \{-1, 3\} = \{2, 4, 7, 9\}$

۶) $A - (B \cap C) = ?$

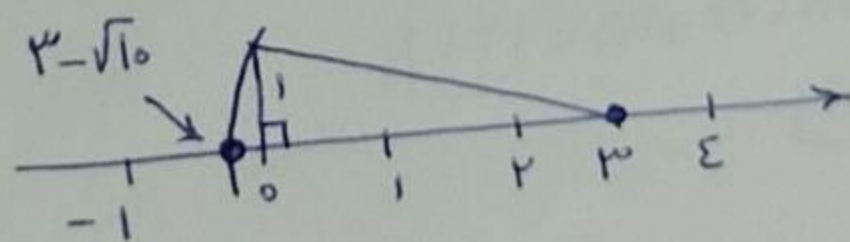


۷) $\frac{\frac{5}{4} - \frac{10}{3}}{-1 - \frac{1}{9}} \div 5 = \frac{\frac{5}{4} - \frac{10}{3}}{-\frac{9}{9} - \frac{1}{9}} \times \frac{1}{5} = \frac{-\frac{15}{4}}{-\frac{10}{9}} \times \frac{1}{5} = \frac{3}{4 \times 10} \times \frac{1}{5} = \frac{3 \times 9}{4 \times 10} = \frac{9}{20}$

۸) $n(S) = 4 \times 3 = 12$

$A = \{(2, 3), (4, 3), (6, 3)\} \rightarrow n(A) = 3$ } $\Rightarrow P(A) = \frac{n(A)}{n(S)} = \frac{3}{12} = \frac{1}{4}$

۹) $3 - \sqrt{10}$ $\sqrt{10} \approx 3,1$



۱۰) $\sqrt{3} < \sqrt{5} < \sqrt{5/2} < \sqrt{4}$

الف - $|4^2 - 4^2| = |16 - 16| = |0| = 0$

ب - $|\sqrt{5} - 2| - |2 - \sqrt{5}| = \sqrt{5} - 2 - (\sqrt{5} - 2) = \sqrt{5} - 2 - \sqrt{5} + 2 = 0$