

REVIEW

① $\sqrt{16} = 4$

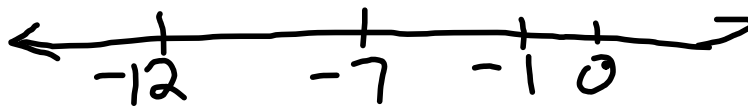
② $\sqrt{49} = 7$

③ $\pi = \text{irrational}$

④ irrational

⑤ ~~$\sqrt{\frac{9}{16}}$~~ $= \frac{\sqrt{9}}{\sqrt{16}} = \frac{3}{4}$ $\sqrt{30}$

⑥ ①



⑦ ① $-2 < |4| < |-6|$

- ⑧
- 2396 ③
 - 2455 ⑤
 - 2200 ①
 - 2450 ④
 - 2241 ②

$0.\overline{220}$, $0.\overline{2241}$, $0.\overline{239608}$,

⑨ subtraction

⑩ integers

⑪ ⑧ $ab = ba$

⑫ D Commutative

$$6 \cdot (4 \cdot 3) = (4 \cdot 3) \cdot 6$$

⑬ C

14) D

15) D

16) A

17) B

18) 1

19) B

20) C

21) B

22) D

23) B

24) 18

25) 12

$$26) - 48$$

$$27) - 15$$

$$28) 9$$

$$29) D$$

$$30) 4x^2 - 3$$

$$\begin{array}{l} 31) \quad (5a + 3b) + 2(a - 3b) \\ \quad \quad (5a + 3b) + 2a - 6b \\ \quad \quad \underline{7a - 3b} \end{array}$$

$$\begin{array}{l} 32) \quad 2x^2 - 3x - 5 \\ \quad \quad -x^2 + x + 6 \\ \quad \quad \hline \quad \quad x^2 - 2x + 1 \end{array}$$

$$33) -4^{-2} = -\frac{1}{4^2} = -\frac{1}{16}$$

$$34) 2^{-3} = \frac{1}{2^3} = \frac{1}{8}$$

$$35) (x-3)(x+2) = x^2 + 2x - 3x - 6 \\ = x^2 - x - 6$$

$$36) (2x-3)^2 = (2x-3)(2x-3) \\ = 4x^2 - 6x - 6x + 9 \\ = 4x^2 - 12x + 9$$

$$37) (2x+3)(x-2) \\ = 2x^2 - 4x + 3x - 6 = 2x^2 - x - 6 \\ c = -6$$

$$38) \frac{8x^4 - 8x}{8x} = \frac{8x^4}{8x} - \frac{8x}{8x} \\ = x^3 - 1$$

$$39) \frac{16x^2 + 4x}{4x} = \frac{16x^2}{4x} + \frac{4x}{4x}$$

$$= 4x + 1$$

$$40) \sqrt{63} = \sqrt{9 \cdot 7} = (\sqrt{9})\sqrt{7}$$

$$= 3\sqrt{7}$$

$$41) \sqrt{80} = \sqrt{16 \cdot 5} = \sqrt{16}\sqrt{5} = 4\sqrt{5}$$

$$42) \sqrt{125} = \sqrt{25 \cdot 5} = \sqrt{25}\sqrt{5} = 5\sqrt{5}$$

$$43) 4\sqrt{12} + 2\sqrt{27}$$

$$4(\sqrt{4})\sqrt{3} + 2(\sqrt{9})\sqrt{3}$$

$$4 \cdot 2\sqrt{3} + 2 \cdot 3\sqrt{3}$$

$$8\sqrt{3} + 6\sqrt{3} = 14\sqrt{3}$$

$$44) 2\sqrt{75} - \sqrt{3}$$

$$2\sqrt{25}\sqrt{3} - \sqrt{3}$$

$$2 \cdot 5\sqrt{3} - \sqrt{3}$$

$$10\sqrt{3} - \sqrt{3} = 9\sqrt{3}$$

$$\begin{aligned}
 45) \sqrt{5} \sqrt{12} &= \sqrt{60} \\
 &= \sqrt{4} \sqrt{15} \\
 &= 2\sqrt{15}
 \end{aligned}$$

$$46) \underline{0.003146} = 3.146 \times 10^{-3}$$

$$47) \underline{0.000023} = 2.3 \times 10^{-5}$$

$$48) \underline{1,726,000} = 1.726 \times 10^8$$

$$\begin{aligned}
 49) -6x - 7(4 + 3x) \\
 &= -6x - 28 - 21x \\
 &= -27x - 28
 \end{aligned}$$

$$\begin{aligned}
 50) 12 + 5(x+1) \\
 12 + 5x + 5 = 5x + 17
 \end{aligned}$$

$$\begin{aligned}
 51) 2(x+8) + 3(x+2) \\
 &= \underline{2x} + 16 + \underline{3x} + 6 \\
 &= 5x + 22
 \end{aligned}$$

$$\begin{aligned}
 52) 5 + 3(x+7) - 2x - 4 \\
 &= 5 + 3x + 21 - 2x - 4 \\
 &= x + 22
 \end{aligned}$$

$$53) (3z^4)(2z) = 6z^5$$

$$54) (7x^2)(2x^3)(-5x) = -70x^6$$

$$55) x(x+7) = x^2 + 7x$$

$$56) (3x-6) \cdot 2x = 6x^2 - 12x$$

$$57) \begin{aligned} 3\sqrt{8} \cdot 2\sqrt{3} &= 6\sqrt{24} \\ &= 6\sqrt{4}\sqrt{6} \\ &= 6 \cdot 2\sqrt{6} \\ &= 12\sqrt{6} \end{aligned}$$

$$58) \frac{\sqrt{8x^5}}{\sqrt{x}} = \frac{\sqrt{8}\sqrt{x^4}\sqrt{x}}{\sqrt{x}} = \sqrt{4}\sqrt{2}x^2 = 2x^2\sqrt{2}$$