

Chapter 2 Practice Exercises (Solutions at www.789adam.com)

Numbers

Circle the Counting (Natural) Numbers: (2) -6 (4) 0 $\frac{1}{3}$ (1000) (250) $\sqrt{13}$ 0.25 π

Circle the Rational Numbers: (18) (4) $(-\frac{2}{3})$ $-\sqrt{5}$ $(2.\overline{67})$ (100) (2.7) π $(\sqrt{9}=3)$ (-1) (0)

Circle the Integers: -1.5 $\frac{3}{4}$ (12) (23) $0.\overline{5}$ (-99) (0) π (1) (-1) 0.25

Circle the Real Numbers: (3) (-8) $(\frac{1}{5})$ (2001) (0.37) (π) (0) $(19.\overline{61})$ $(\sqrt{73})$ (-56)

Operators

Explain the difference between $\sqrt{16} + 9$ and $\sqrt{16 + 9}$.

In the first one, we perform $\sqrt{16}$ first then add 9: $4 + 9 = 13$

In the second, we add first then take the square root: $\sqrt{25} = 5$

What is $41 \div 0$?

This does not exist because division by zero is undefined

Apply Correct Order of Operations

$$3 + 5 \cdot 2^2$$

$$3 + 5 \cdot 4$$

$$3 + 20$$

$$23$$

$$6 \div (2 + 1) - 3$$

$$6 \div 3 - 3$$

$$2 - 3$$

$$-1$$

$$1 + 2 \cdot 3 - 4$$

$$1 + 6 - 4$$

$$7 - 4$$

$$3$$

$$\sqrt{25} - 16$$

$$5 - 16$$

$$-11$$

$$3 + (5 \cdot 2)^2$$

$$3 + 10^2$$

$$3 + 100$$

$$103$$

$$6 \div 2 + (1 - 3)$$

$$6 \div 2 + -2$$

$$3 + -2$$

$$1$$

$$(1 + 2)^2 \cdot (3 - 4)^3$$

$$3^2 \cdot (-1)^3$$

$$9 \cdot (-1)$$

$$-9$$

$$\sqrt{25 - 16}$$

$$\sqrt{9}$$

$$3$$

$$2 + 3 \times 5$$

$$2 + 15$$

$$17$$

$$5 \times 4 \div 2 + 3$$

$$20 \div 2 + 3$$

$$10 + 3$$

$$13$$

$$5 \times 4 \div (2 + 3)$$

$$5 \times 4 \div 5$$

$$20 \div 5$$

$$4$$

$$\sqrt{25} - \sqrt{16}$$

$$5 - 4$$

$$1$$

$$\frac{1+2}{3}$$

$$\frac{3}{3}$$

$$\frac{3}{3}$$

$$1$$

$$5 \times (4 \div 2 + 3)$$

$$5 \times (2 + 3)$$

$$5 \times 5$$

$$25$$

$$[3 + (8 + 4) \div 2] \div 3$$

$$[3 + 12 \div 2] \div 3$$

$$[3 + 6] \div 3$$

$$9 \div 3$$

$$3$$

$$1 + 2^3$$

$$1 + 8$$

$$9$$

$10 + 12 \div 2$

$10 + 6$

16

$$\frac{(12+2) \div 7}{10-4 \cdot 2}$$
$$\frac{14 \div 7}{10-8}$$

$\frac{2}{2}$

1

$(8+4) \div 2 + 3^2 \div 3$

$12 \div 2 + 3^2 \div 3$

$12 \div 2 + 9 \div 3$

$6 + 9 \div 3$

$6 + 3$

9

$(1+2)^3$

3^3

27

$(10+12) \div 2$

$22 \div 2$

11

$4 \cdot 3^2$

$4 \cdot 9$

36

$\sqrt{5^2}$

$\sqrt{25}$

5

$\sqrt{\sqrt{16}}$

$\sqrt{4}$

2

$\sqrt{9^3}$

3^3

27