

CHAPTER 2

Algebraic Expressions

2.1 Grouping and the Order of Operations

1)

b) $P = 4.8 \text{ mm} + 7.64 \text{ mm} + 5.2 \text{ mm}$

c) $P = 7.64 \text{ mm} + (5.2 \text{ mm} + 4.8 \text{ mm}) = 17.64 \text{ mm}$

d) $P = 5.2 \text{ mm} + 4.8 \text{ mm} + 7.64 \text{ mm}$

$$P = 17.64 \text{ mm}$$

$$P = 4.8 \text{ mm} + 7.64 \text{ mm} + 5.2 \text{ mm}$$

$$P = 17.64 \text{ mm}$$

3) $A = (220 \text{ ft}) [198 \text{ ft} + 297 \text{ ft} + 396 \text{ ft}]$

$$A = 196,020 \text{ ft}^2$$

$$A = (220 \text{ ft}) (198 \text{ ft}) + (220 \text{ ft}) (297 \text{ ft}) + (220 \text{ ft}) (396 \text{ ft})$$

$$A = 196,020 \text{ ft}^2$$

5)

a) $4 \cdot 512 = 4 \cdot 500 + 4 \cdot 12$

b) Distributive Property of Multiplication over Addition (Fact 2.2).

c) 44.33

7) *Expansion*

9) 1

11)

a) 5.25

13) Answers will vary.

15)

a) $a + b - 8 - c$

b) $z - y - 6$

c) $3 - s + t$

17)

a) $50 \frac{\text{ft}^2}{\text{hr}}$

b) $\frac{5}{6} \frac{\text{ft}^2}{\text{min}}$ $0.83 \frac{\text{ft}^2}{\text{min}}$

c) $\frac{1}{9} \frac{\text{wall}}{\text{hr}}$ $0.11 \frac{\text{wall}}{\text{hr}}$

19)

a) 19