

Lesson 15

1) rectangular walls:

$$2(25 \times 12) + 2(18 \times 12) =$$

$$2(300) + 2(216) =$$

$$600 + 432 = 1,032 \text{ sq. ft.}$$

triangular sections:

$$2(1/2)(12 \times 18) = 216 \text{ sq. ft.}$$

total:

$$1,032 + 216 = 1,248 \text{ sq. ft.}$$

2) $1,248 \div 425 = 2.94$ gal. (rounded)

2.94×2 coats = 5.88 gal., so 6 gal will need to be purchased

$$6 \times 28 = \$168$$

3) if 2 5-gallon buckets were purchased:

$$2 \times 120 = \$240.00$$

In a real-life situation you probably would have purchased one 5-gallon bucket, and a 1-gallon bucket.

$$120 + 28 = \$148$$

$$168 - 148 = \$20 \text{ savings}$$

4) $1,248 \div 250 = 5$ gal. (rounded)

$$5 \times 2 \text{ coats} = 10 \text{ gal.}$$

$$10 \times 20 = \$200$$

The more expensive paint is a better buy, because you don't have to buy as much of it.

5) $4(18) + 4(25) =$

$$72 + 100 =$$

$$172 \text{ sq. ft.}$$

$$1248 - 172 = 1076 \text{ sq. ft.}$$

6) $1076 \times 1.12 = 1205.12$

13 squares

7) whole rectangle:

$$12 \times 18 = 216 \text{ sq. ft.}$$

closet:

$$6 \times 3 = 18 \text{ sq. ft.}$$

cutout:

$$4 \times 8 = 32 \text{ sq. ft.}$$

$$216 - 18 - 32 = 166 \text{ sq. ft.}$$

8) 9 sq. ft. in a sq. yd.

$$166 \div 9 = 18.44 \text{ sq. yd. (rounded)}$$

9) $18.44 \times 1.10 = 20.28$ (rounded)

21 sq. yds. needed

$$12 \times 21 = \$252$$

10) $166 + 18 = 184 \text{ sq. ft.}$

$$184 \div 9 = 20.45 \text{ sq. yds.}$$

$$20.45 \times 1.10 = 22.495 \text{ sq. yds.}$$

23 sq. yds. will be needed

$$23 \times 12 = \$276$$

Lesson 16

1) each face is a triangle

$$A = 1/2(bh)$$

$$A = 1/2(4)(3.5)$$

$$A = 7 \text{ sq. in. per face}$$

$$7 \cdot 8 = 56 \text{ sq. in.}$$

2) each face is a square

$$5 \times 5 = 25 \text{ sq. in. per face}$$

$$25 \times 6 = 150 \text{ sq. in.}$$

3) each face is a triangle

$$A = 1/2(bh)$$

$$A = 1/2(10)(8.7)$$

$$A = 43.5 \text{ sq. in. per face}$$

$$43.5 \times 20 = 870 \text{ sq. in.}$$

4) $4 + 4 = 6 + 2$

$$8 = 8$$

5) $8 + 6 = 12 + 2$

$$14 = 14$$

6) $12 + 20 = 30 + 2$

$$32 = 32$$

7) $20 + 12 = 30 + 2$

$$32 = 32$$