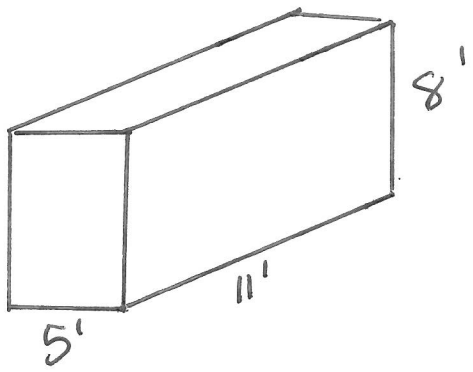
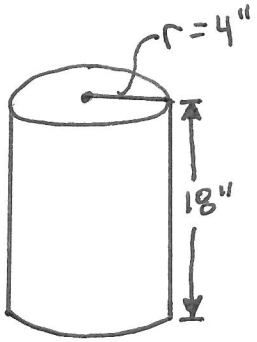
Ch. 17 BOARD PROBLEMS

FIND THE SURFACE AREA

① 

② 

③ IF A CIRCLES DIAMETER EQUALS 2.5 ft, THEN THE RADIUS = _____.

④ π = _____.

⑤ FORMULA FOR AREA OF A CIRCLE _____.

Ch. 17 - RADICALS

① $2\sqrt{2} + 3\sqrt{2} =$

② $6\sqrt{5} - 2\sqrt{5} =$

③ $6\sqrt{3} + 2\sqrt{3} =$

④ $2\sqrt{3} + 3\sqrt{2} + 4\sqrt{3} - \sqrt{2} =$ _____

⑤ $\sqrt{7} \times \sqrt{6} =$

⑥ $2\sqrt{5} \times 3\sqrt{2} =$

⑦ $\frac{\sqrt{21}}{\sqrt{3}} = \sqrt{\frac{21}{3}} =$

NOTE: IMPORTANT CONCEPT

Simplifying Radicals

$\sqrt{4} =$

$\sqrt{9} =$

$\sqrt{12} =$

$\sqrt{18} =$

$\sqrt{27} =$

$3\sqrt{75} =$

$5\sqrt{48} =$

$\sqrt{6276} =$

MORE SIMPLIFYING RADICALS

$8\sqrt{242} =$

$4\sqrt{288} =$

$2\sqrt{2} \times 3\sqrt{6} =$

$4\sqrt{2} + 6\sqrt{18} =$

Systematic Review

Factoring Trinomials

$x^2 + 7x + 12$

$2x^2 + 6x - 56$

LESSON PRACTICE

17A

Simplify the radical expressions. Some may require more than one step to simplify completely.

1. $5\sqrt{2} + 3\sqrt{5} =$

2. $8\sqrt{7} + 3\sqrt{3} =$

3. $12\sqrt{6} - 10\sqrt{6} =$

4. $11\sqrt{2} + 3\sqrt{2} + 5\sqrt{2} =$

5. $\frac{12\sqrt{24}}{6\sqrt{3}} =$

6. $\frac{25\sqrt{10}}{5\sqrt{5}} =$

7. $\sqrt{24} =$

8. $\sqrt{300} =$

9. $\sqrt{48} =$

10. $(5\sqrt{3})(6\sqrt{5}) =$

Use a calculator to find the value of the radicals to the nearest hundredth.

13. $\sqrt{5}$ =

14. $\sqrt{3}$ =

15. $\sqrt{14}$ =

Fill in the blanks.

16. The symbol $\sqrt{\ }$ is known as a square root, or _____ sign.

17. When multiplying radicals, take numbers times _____ and radicals times _____.

18. A number whose square root is a whole number is known as a perfect _____.

Follow the directions to find the number of coins.

There are 20 coins made up of nickels and dimes. The total value is $1.75.

1. Write two equations, one for the number of coins and one for the value.

2. How many nickels are there?

3. How many dimes are there?

There are 39 coins made up of pennies and dimes. The total value is $1.83.

4. Write two equations, one for the number of coins and one for the value.

5. How many pennies are there?

6. How many dimes are there?

There are 19 coins made up of nickels and dimes. The total value is $1.25.

7. Write two equations, one for the number of coins and one for the value.

8. How many nickels are there?

9. How many dimes are there?

There are 40 coins made up of quarters and nickels. The total value is $5.00.

10. Write two equations, one for the number of coins and one for the value.

11. How many quarters are there?

12. How many nickels are there?

For #1-3 There are 12 coins made up of nickels and dimes. The total value is $.85.

1. Write the two equations, one for the number of coins and one for the value.

2. There are _____ dimes.

3. There are _____ nickels. Check your answers.

For #4-6 There are 10 coins made up of pennies and nickels. The total value is $.38.

4. Write the two equations, one for the number of coins and one for the value.

5. There are _____ pennies.

6. There are _____ nickels. Check your answers.

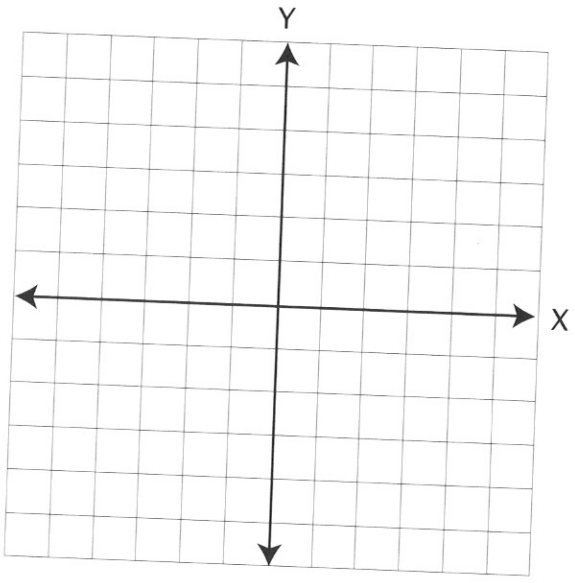
For #7-8 $3Y - 4X = 2$ and $Y - 2X = -6$

7. Use the elimination method to find Y.

8. Use the solution to #7 to find X.

9. Find the equation of a line through (4, 5) and (-3, -2). Graph the line.

10. Write the equation of a line through (1, -2) and parallel to the line in #9. Graph the line.



11. Write the equation of a line through (1, -2) and perpendicular to the line in #9. Graph the line.

12. When first observed, the vine was 24 inches long. Thereafter it grew at a length of two feet per week. Write an equation describing the growth of the vine where X is the number of weeks and Y is the total length.

    (Warning: Be sure your units of measure are the same.)

13. Using your equation from #12, find the length of the vine after three weeks.

14. With the application of fertilizer, the vine will grow three feet per week. Find its length after nine weeks.

15. $(3 + 5) \times (2 - 7) - 3 - 3^2 =$

16. In what quadrant is the point (6, -7)?

17. Is subtraction commutative?

18. Is multiplication commutative?

19. $13^2 =$

20. $\sqrt{64} =$

For #1-3 There are nine coins made up of nickels and dimes. The total value is $.60.

1. Write the two equations, one for the number of coins and one for the value.

2. There are _____ dimes.

3. There are _____ nickels. Check your answers.

For #4-6 There are six coins made up of pennies and nickels. The total value is $.26.

4. Write the two equations, one for the number of coins and one for the value.

5. There are _____ pennies.

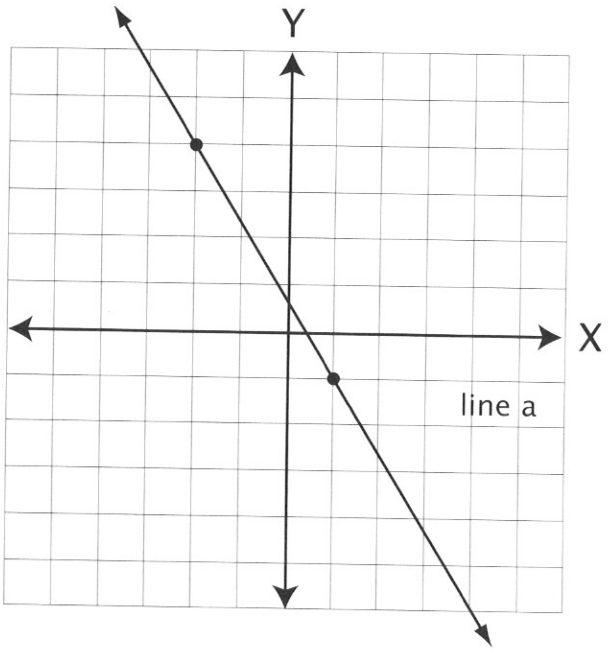
6. There are _____ nickels. Check your answers.

For #7-8 $Y - 3X = -1$ and $4Y + 3X = -19$

7. Use the elimination method to find Y.

8. Use the solution to #7 to find X.

9. Look at line *a* on the graph and write an equation for it.



10. Write the equation of a line through (2, 2) and parallel to #9. Graph the line.

11. Write the equation of a line through (-2, -6) and perpendicular to #9. Graph the line.