Combine & Simplify

① $8\sqrt{2} \cdot 6\sqrt{10} =$

② $4\sqrt{3} \cdot 3\sqrt{3} =$

③ $4\sqrt{3} + 3\sqrt{2} - 8\sqrt{3} =$

④ $\dfrac{\sqrt{96}}{\sqrt{12}} =$

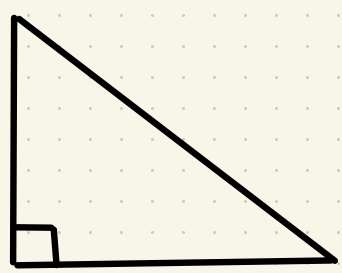
SIMPLIFY

① $\sqrt{720} =$ ② $\sqrt{175} =$ ③ $\sqrt{84} =$

④ COMPLETE THE SQUARE.

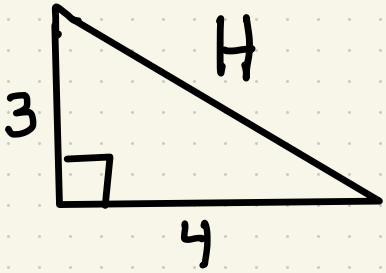
$x^2 + 10x + 14 = -7$

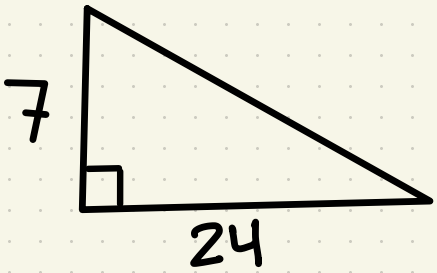
Ch. 18 - Pythagorean Theorem

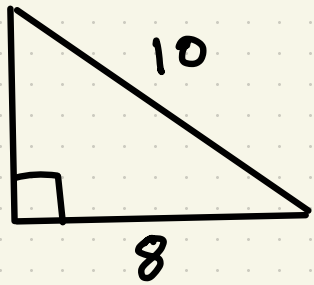


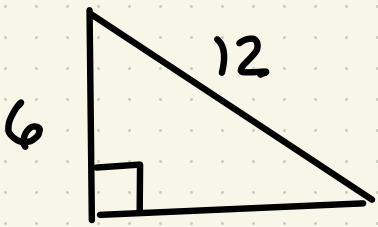
 - ONLY WORKS FOR RIGHT TRIANGLES.

PYTHAGOREAN THEOREM









5 minute Practice

Squares to 25

1^2 = ___ x ___ = ___

2^2 = ___ x ___ = ___

3^2= ___ x ___ = ___

4^2= ___ x ___ = ___

5^2= ___ x ___ = ___

6^2= ___ x ___ = ___

7^2 = ___ x ___ = ___

8^2 = ___ x ___ = ___

9^2 = ___ x ___ = ___

10^2 = ___ x ___ = ___

11^2 = ___ x ___ = ___

12^2= ___ x ___ = ___

13^2= ___ x ___ = ___

14^2 = ___ x ___ = ___

15^2 = ___ x ___ = ___

16^2= ___ x ___ = ___

17^2= ___ x ___ = ___

18^2 = ___ x ___ = ___

19^2 = ___ x ___ = ___

20^2 = ___ x ___ = ___

21^2 = ___ x ___ = ___

22^2 = ___ x ___ = ___

23^2 = ___ x ___ = ___

24^2 = ___ x ___ = ___

25^2 = ___ x ___ = ___

GIVEN 3 SIDES OF A TRIANGLE, IS THE TRIANGLE A RIGHT △?

1) 12, 16, 20

2) 12, 13, 16

LESSON PRACTICE

18A

Fill in the blanks.

1. A triangle with one 90° angle is a _____ triangle.

2. The two sides of the 90° angle are called the _____ of the triangle.

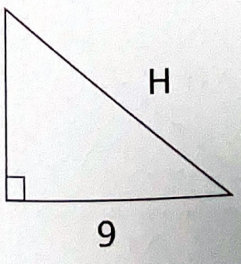
3. The side opposite the 90° angle is the _____ .

4. The _____ theorem states the relationship between the sides of a right triangle.

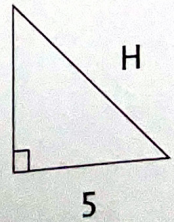
Complete and state the converse.

5. If a triangle is a right triangle, leg squared plus leg squared equals...

Find the lengths of the unknown side of each triangle. Keep any radicals in your answers, but be sure the radicals are simplified.

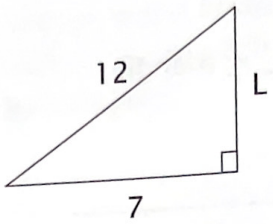
6. 

H = _____

7. 

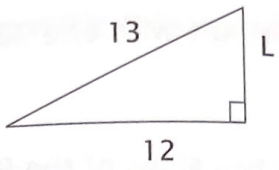
H = _____

8.



L = _____

9.



L = _____

Given three sides of a triangle, use the Pythagorean theorem to determine if the triangle is a right triangle.

10. 5, 6, 8

11. 2, 4, 6

12. 6, 8, 10

LESSON PRACTICE

Follow the directions to find the unknown integers.

Find three consecutive even integers such that three times the third is equal to twice the sum of the first and second, plus two.

1. Represent each integer with an unknown.

2. Write an equation using the unknowns.

3. Solve for the three integers.

4. Check by substituting the integers in your equation.

Find three consecutive integers such that the sum of the first and third is equal to twenty times the second.

5. Represent each integer with an unknown.

6. Write an equation using the unknowns.

7. Solve for the three integers.

8. Check by substituting the integers in your equation.

Find three consecutive integers such that five times the first integer plus twice the second is equal to six times the third.

9. Represent each integer with an unknown.

10. Write an equation using the unknowns.

11. Solve for the three integers.

12. Check by substituting the integers in your equation.

Find three consecutive odd integers such that the first plus the third is equal to three times the second plus nineteen.

13. Represent each integer with an unknown.

14. Write an equation using the unknowns.

15. Solve for the three integers.

16. Check by substituting the integers in your equation.

For #1-3 Find three consecutive even integers such that five times the third, minus four times the first, is the same as four times the second.

1. Represent each integer with an unknown.

2. Write an equation using the unknowns.

3. Solve for the three integers.

For #4-6 Find three consecutive integers such that six times the second, plus four times the first, is the same as nine times the third, minus four.

4. Represent each integer with an unknown.

5. Write an equation using the unknowns.

6. Solve for the three integers.

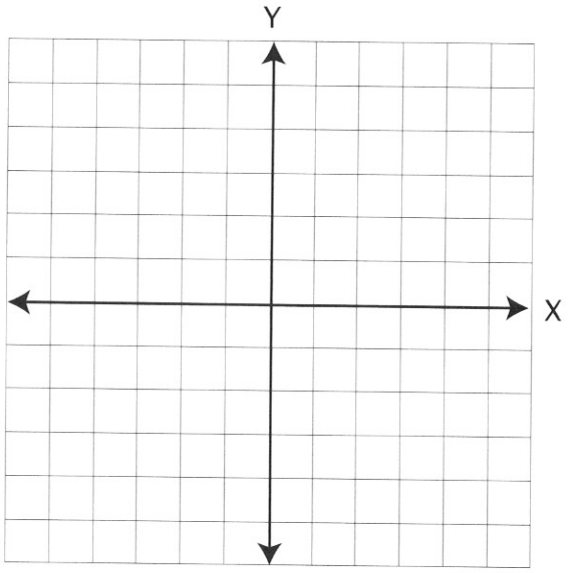
7. Eleven coins made up of dimes and nickels have a value of $.80. Solve and check your answer.

For #8-10 $Y - 5 > 4X - 9$

8. Rewrite using the slope-intercept form.

9. Graph the inequality.

10. Does the point (1, 2) satisfy the inequality?



11. Line 1: $4Y + X = 11$
    Line 2: $2Y - 3X = 9$

    Using the substitution or elimination method, find X and Y.

12. What is the equation of a line parallel to line 1 in #11 through (0, 1)?

13. What is the least common multiple of 3 and 7?

14. Use algebraic symbols to represent the following: the sum of a number and two, multiplied by four, equals twenty-three, plus the number.

15. Solve for the unknown in #14.

16. Use the value of the unknown found in #15 to find the value of this expression: $[2(X - 3) + 1] \div X$.

17. One-half plus two-thirds equals _____.

18. $75\% \times 250 =$

19. Solve: $1.8 - .16A = 10$

20. What are the prime factors of 96?

For #1-3 Find three consecutive odd integers such that four times the third, plus one, is the same as three times the first, plus two times the second.

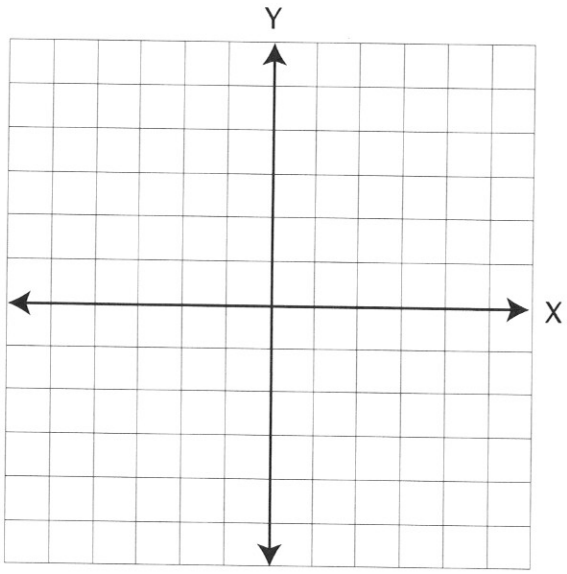
1. Represent each integer with an unknown.
2. Write an equation using the unknowns.
3. Solve for the three integers.

For #4-6 Find three consecutive integers such that three times the first, minus five times the second, is the same as negative one.

4. Represent each integer with an unknown.
5. Write an equation using the unknowns.
6. Solve for the three integers.
7. Fifteen coins made up of dimes and nickels have a value of $1.10. Solve and check your answer.

For #8-10 $Y + 2 > X$

8. Rewrite using the slope-intercept form.
9. Graph the inequality.
10. Does the point (-4, -3) satisfy the inequality?



11. Line 1: $5Y + 6X = -19$
    Line 2: $5Y + 3X = -22$

    Using the substitution or elimination method, find X and Y.

12. What is the equation of a line perpendicular to line 1 in #11 through (-4, 1)?

13. What is the least common multiple of 6 and 8?

14. Use algebraic symbols to represent the following: two times a number, minus six, plus eight times the number, equals four.

15. Solve for the unknown in #14.

16. Use the value of the unknown found in #15 to find the value of this expression: $3X - X^2 + 13 - 4X$.

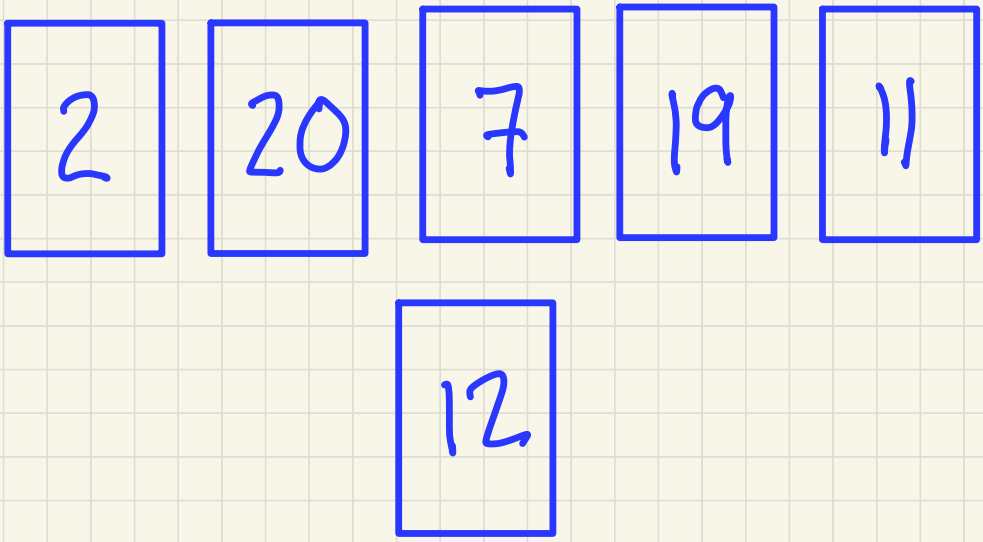
17. One-sixth plus three-fourths equals _____.

18. $13\% \times 180 =$

19. Solve: $6A - 16 - 4A = 20$

20. What are the prime factors of 135?

KRYPTO



Bagel - 0
Pico - 1R, WP
Fermi - 1R, RP

0 1 2 3 4 5 6 7 8 9

CLASS MARNA