

MATH CCSS TEST REVIEW



a 10+ day common core aligned test prep
this resource is 100% aligned to CCSS

comprehensive, ready-to-go test review unit

MATH END-OF-THE-YEAR REVIEW INSTRUCTIONS AND IMPLEMENTATION

TABLE OF CONTENTS

The following items have been included in the Math End-of-the-Year Review pack.

TOPIC	STANDARDS	ACTIVITY
Real Number System	8.NS.1, 8.NS.2	Stations
Exponents and Scientific Notation	8.EE.1, 8.EE.2, 8.EE.3, 8.EE.4	Mazes
Functions and Slope	8.EE.5, 8.EE.6, 8.F.1, 8.F.5	Spin to Ten
Linear Relationships	8.EE.5, 8.EE.6, 8.F.2, 8.F.3, 8.F.4	Four Corners
Linear Equations	8.EE.7, 8.EE.8	Scavenger Hunt
Angle Relationships	8.G.5	Cut and Paste
Pythagorean Theorem	8.G.6, 8.G.7, 8.G.8	Task Cards
Volume	8.G.9	Domino Train
Transformations	8.G.1, 8.G.2, 8.G.3, 8.G.4	Find It, Fix It
Scatter Plots and Data	8.SP.1, 8.SP.2, 8.SP.3, 8.SP.4	He Said, She Said

Additionally, the same content has been formatted for easier printing by placing all of the like materials in one file. For example, all of the quizzes together, all of the activities together, all of the warm-ups together, etc.

Activities Only.pdf	<input checked="" type="checkbox"/>	Ye
Cheat Sheets Only.pdf	<input checked="" type="checkbox"/>	Ye
Quick Checks Only.pdf	<input checked="" type="checkbox"/>	Ye
Teacher Guides Only.pdf	<input checked="" type="checkbox"/>	Ye
Warm-Ups Only.pdf	<input checked="" type="checkbox"/>	Ye

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MATH CCSS TEST REVIEW



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PYTHAGOREAN THEOREM TEACHER GUIDE

STANDARDS

READINESS

8.7C Use the Pythagorean theorem and its converse to solve problems

SUPPORTING

8.6C Use models and diagrams to explain the Pythagorean theorem

8.7D Determine the distance between two points on a coordinate plane using the Pythagorean theorem

VOCABULARY & KEYWORDS

converse: a statement that switches the order of the "if" and the "then"

hypotenuse: the side of a right triangle that is opposite from the right angle

legs: the sides of a right triangle that are adjacent to the right angle

COMMON MISTAKES AND MISCONCEPTIONS

- Students may incorrectly label the sides of a right triangle (a, b and c) especially if the triangle is oriented in an unfamiliar way.
- When using the Pythagorean theorem, students may multiply a, b and c by 2 rather than squaring them.
- When using the Pythagorean theorem to solve for a missing side length, students may forget the last step of taking the square root.
- Students may want to try and count units on a coordinate plane to find distance rather than use the Pythagorean theorem.

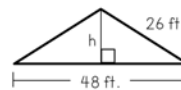
teacher guides includes:

- ✓ standards
- ✓ vocabulary
- ✓ misconceptions

PYTHAGOREAN THEOREM WARM-UP

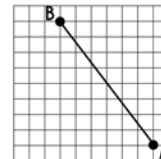
Name _____
Date _____ Pd _____

1. The side view of Mrs. Marigold's roof on her house is shown below.



Find h, the height of Mrs. Marigold's roof.

2. Point A on the graph below represents Nate's house, and Point B represents Nate's favorite restaurant.



If each unit on the graph represents $\frac{1}{4}$ of a mile, how many miles does Nate live from his favorite restaurant?

2 warm-up questions per topic



PYTHAGOREAN THEOREM WARM-UP

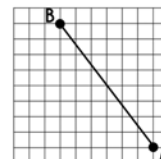
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cheat sheets cover
key concepts

PYTHAGOREAN THEOREM
CHEAT SHEET - A

Name _____
Date _____ Pd _____

parts of right triangles

LEGS: the two sides touching the right angle, known as "a" and "b".

HYPOTENUSE: the side opposite the right angle, known as "c".

The hypotenuse is always the longest of the three sides.

the pythagorean theorem

In any **RIGHT** triangle, the **SUM** of the **SQUARES** of the shorter sides (a and b) will equal the **SQUARE** of the longest side, c. In other words...

$$a^2 + b^2 = c^2$$

To visualize the theorem, picture "a²", "b²" and "c²" as actual squares with side lengths equal to the side lengths of a, b and c:

The **AREAS** of the two smaller squares (a² + b²) = 3 25 units²

The converse states that **IF** $a^2 + b^2 = c^2$, then the triangle is a **RIGHT** triangle.

EXAMPLE 1:
Can the lengths 16, 30 and 34 make a right triangle? Plug it into the theorem:

$$16^2 + 30^2 = 34^2$$

$$256 + 900 = 1156$$

$$1156 = 1156$$

Yes!

EXAMPLE 2:
Can the lengths 12, 12 and 24 make a right triangle? Plug it into the theorem:

$$12^2 + 12^2 = 24^2$$

$$144 + 144 = 576$$

$$288 \neq 576$$

No!

Pythagorean converse

PYTHAGOREAN THEOREM
CHEAT SHEET - B

Name _____
Date _____ Pd _____

satisfit right fo stard

LEGS: the two sides touching the _____ angle, known as "_____" and "_____".

HYPOTENUSE: the side opposite the _____ angle, known as "_____".

The _____ is always the longest of the three sides.

the pythagorean theorem

In any _____ triangle, the **SUM** of the _____ of the shorter sides (a and b) will equal the _____ of the longest side, c. In other words...

$$a^2 + b^2 = c^2$$

To visualize the theorem, picture "a²", "b²" and "c²" as

The converse states that **IF** _____ then the triangle is a **RIGHT** triangle.

EXAMPLE 1:
Can the lengths 16, 30 and 34 make a right triangle? Plug it into the theorem:

$$16^2 + 30^2 = 34^2$$

$$__ + __ = __$$

$$__ = __$$

EXAMPLE 2:
Can the lengths 12, 12 and 24 make a right triangle? Plug it into the theorem:

$$12^2 + 12^2 = 24^2$$

$$__ + __ = __$$

$$__ = __$$

Pythagorean converse

PYTHAGOREAN THEOREM
CHEAT SHEET - C

Name _____
Date _____ Pd _____

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the pythagorean theorem

Pythagorean converse

the coordinate plane

3 scaffolded
versions



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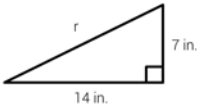
assessments with 8-10 questions

PYTHAGOREAN THEOREM QUICK CHECK

Name _____
Date _____ Pd _____

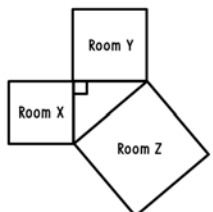
1. The side view of a ramp that Jessie built for his race cars is shown below. Find r , the length of the ramp to the nearest tenth.

A. 21 inches
B. 15.7 inches
C. 6.5 inches
D. 17.4 inches



2. Three square rooms in Joey's house meet to form a right triangle as shown. Joey is going put new carpet to cover the floor of each room as well as new trim around the edges of each room. Which is a true statement based on the diagram?

F. The amount of carpet needed in Room Z should be the same as the carpet needed in both Room X and Room Y.
G. The amount of trim needed in Room Z should be the same as the trim needed in both Room X and Room Y.
H. Both statements above are true.
J. Neither statements above are true.

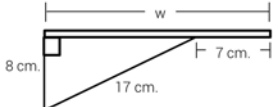


3. Titus is building a triangular frame with three pieces of wood that measure 3 inches, 5 inches and 10 inches. Which of the following is true about the frame?

A. The frame will be a right triangle because $5(2) + 3(2) < 10(2)$.
B. The frame will be a right triangle because $5^2 + 3^2 < 10^2$.
C. The frame will not be a right triangle because $5^2 + 3^2 \neq 10^2$.
D. The frame will not be a right triangle because $5(2) + 3(2) \neq 10(2)$.

4. The side view of a wall shelf in Luke's office is shown below. The diagonal support piece is 17 centimeters. The piece against the wall is 8 centimeters. What is the approximate measure of w , the total width of the shelf?

F. 8 centimeters
G. 15 centimeters
H. 22 centimeters
J. 26 centimeters



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- ✓ multiple choice
- ✓ griddable
- ✓ Google Forms™ version included

1. (A) (B) (C) (D)
2. (F) (G) (H) (J)
3. (A) (B) (C) (D)
4. (F) (G) (H) (J)
5. (A) (B) (C) (D)
6. (F) (G) (H) (J)
7. (A) (B) (C) (D)
8. (F) (G) (H) (J)
9. (A) (B) (C) (D)
10. Use the grid below.

⊕	⊖	⊕	⊖	⊕	⊖	⊕	⊖	⊕	⊖
⊕	⊖	⊕	⊖	⊕	⊖	⊕	⊖	⊕	⊖
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0

PYTHAGOREAN THEOREM ANSWER KEYS

answer keys included 

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8th
GRADE

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10 easy-to-prep activities



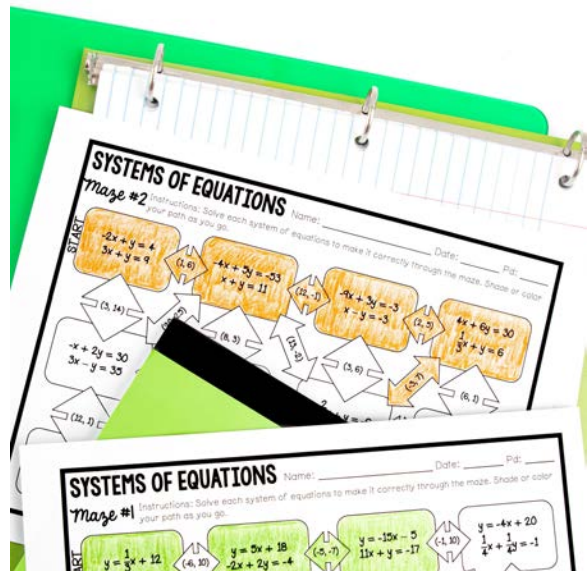
he said, she said
error analysis activity



scavenger hunt
great for partner work



cut and paste
variety of uses



mazes
self-checking + leveled

stations – mazes – spin to ten – four corners – cut and paste – task cards
domino train – find it, fix it – he said, she said – scavenger hunt

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