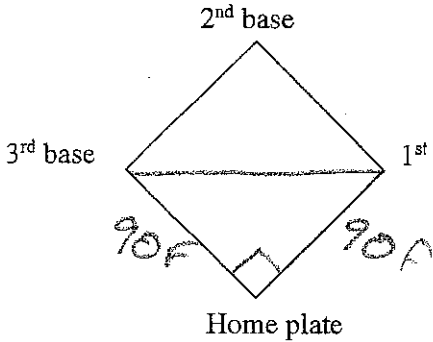


2. A baseball diamond is a square with a side length of 90 feet. To the nearest foot, what is the distance between first base and third base?



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

$$90^2 + 90^2 = c^2$$

$$8100 + 8100 = c^2$$

$$16200 = c^2$$

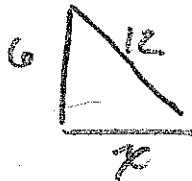
$$c = \sqrt{16200}$$

$$c = 127.279$$

- A 810 ft
 B 90 ft
 C 180 ft
 D 127 ft

3. A flower garden is in the shape of a right triangle. One leg of the triangle is 6 ft long and the hypotenuse is 12 ft long. What is the length of the other leg?

- A 14.6 ft
 B 10.4 ft
 C 13 ft
 D 12.8 ft



$$c^2 - a^2 = b^2$$

$$12^2 - 6^2 = b^2$$

$$144 - 36 = b^2$$

$$108 = b^2$$

$$b = \sqrt{108}$$

$$b = 10.4$$

4. Which of the following sets of numbers represents a Pythagorean Triple?

- A {10, 5, 12}
 B {2, 4, 5}
 C {1, 2, 3}
 D {14, 48, 50}

$$1^2 + 2^2 = 2^2$$

$$1 + 4 = 5^2$$

$$\sqrt{5} = 2.2$$

$$A) 10^2 + 5^2 = 125 \neq 144$$

$$C = \sqrt{125}$$

$$C = 11.18$$

$$b) 2^2 + 4^2 = c^2$$

$$4 + 16 = c^2$$

$$c = \sqrt{20}$$

$$c = 4.5 ?$$

5. Which of the following sets of numbers does NOT represent a Pythagorean Triple?

- A {34, 16, 30}
 B {10, 24, 26}
 C {19, 21, 23}
 D {5, 12, 13}

$$B) 34^2 + 16^2 = c^2$$

$$1156 + 256 = c^2$$

$$1412 = c^2$$

$$c = \sqrt{1412}$$

$$c = 37.5$$

$$\sqrt{2500} = c$$

$$50 = c$$

$$19^2 + 21^2 = c^2$$

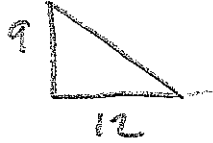
$$361 + 441 = c^2$$

$$802 = c^2$$

$$c = \sqrt{802}$$

6. A right triangle has legs of lengths 9 cm and 12 cm. What is the length of the hypotenuse?

- A 15 cm
- B 22 cm
- C 25 cm
- D 14 cm



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

$$9^2 + 12^2 = c^2$$

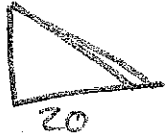
$$81 + 144 = 225$$

$$c = \sqrt{225}$$

$$c = 15$$

7. A triangle has legs which measure 15 inches and 20 inches. Find the length of the hypotenuse.

- A 28 inches
- B 32 inches
- C 13 inches
- D 25 inches



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

$$15^2 + 20^2 = c^2$$

$$225 + 400 = c^2$$

$$625 = c^2$$

$$c = \sqrt{625}$$

$$c = 25$$

8. A 20-ft-long wire is used to support a television antenna. The wire is connected to the antenna 15 ft above the ground. How far away from the base of the tower will the other end of the wire be located?

- A 13.2 ft
- B 25 ft
- C 18 ft
- D 16.5 ft



$$c^2 - a^2 = b^2$$

$$20^2 - 15^2 = b^2$$

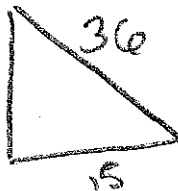
$$400 - 225 = 175$$

$$b = \sqrt{175}$$

$b = 13.2$

9. Gina is making a quilt in the shape of a right triangle. The measurement of the diagonal of the quilt is 36 in. long. The width of the quilt is 15 in. long. What is the approximate length?

- A 27.3 in.
- B 32.7 in.
- C 19.6 in.
- D 29.9 in.



$$c^2 - a^2 = b^2$$

$$36^2 - 15^2 = b^2$$

$$1296 - 225 = 1071$$

$$b = \sqrt{1071}$$

$b = 32.7$

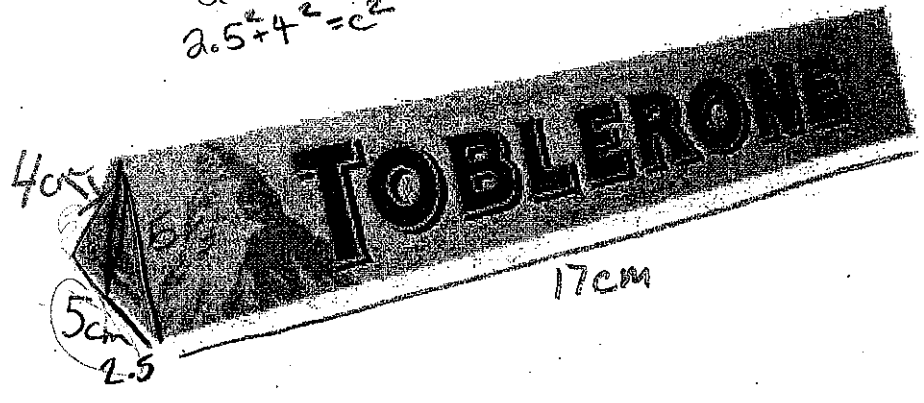
Complete the questions below:

<p>Compare the following numbers using < or >.</p> <p>a) $\sqrt{8}$ <input checked="" type="checkbox"/> $\sqrt{10}$ b) $\sqrt{25}$ <input checked="" type="checkbox"/> 6 c) 5^3 <input checked="" type="checkbox"/> $\sqrt{144}$</p> <p>2.82 3.16 5 125 12</p>	<p>Find the value of:</p> $4^2 \div 1^9 + 3^3$ $(16 \div 1) + 27$ $16 + 27$ $= 43$
--	--

Ellie

$$a^2 + b^2 = c^2$$
$$2.5^2 + 4^2 = c^2$$

Height of triangle 4cm



Toblerone comes in an iconic

triangular prism package. How many square cm of paper is required to wrap up a Toblerone bar?

$$b \times h = 2 = a \Delta$$
$$5 \times 4 = 20$$
$$= 20 \div 2$$
$$= 10$$
$$= 10 \times 2$$
$$= 20$$

$$159.8 \text{ area of 2 sides}$$
$$+ 85 \text{ area of base}$$
$$+ 20 \text{ area of 2 triangles}$$
$$\hline 264.8$$

$$l \times w = a$$
$$17 \times 4.7 = 79.9$$

$$79.9 \times 2 \text{ b/c there are 2 sides}$$
$$= 159.8$$

area of 2 sides



$$a^2 + b^2 = c^2$$
$$4^2 + 2.5^2 = c^2$$
$$16 + 6.25 = c^2$$
$$22.25 = c^2$$
$$c = \sqrt{22.25}$$
$$c = 4.7$$

the hyp. of right angle triangle

$$5 \times 17 = 85$$

area of base

∴ you will need 264.8 cm² of paper to wrap a toberone

If the packaging costs the company two cents per cm², how much does it cost to wrap up one Toblerone bar?

265 cm² of pkg.

2¢ / cm²

100¢ is a dollar

if it was 1¢ / cm² it would be 2.65\$ per pkg.

2.65 × 2 b/c its 2¢ / cm²

∴ it costs the company 5.30\$ to Package 1 bar.

The company estimates the cost to make a Toblerone bar is 2 cents per cubic centimeter. How much does it cost the company to make one Toblerone bar?

$$AA = b \times h \div 2$$

$$= 5 \times 17 \times 4 \div 2$$

$$= 35 \times 4 \div 2$$

$$= 340 \div 2$$

$$= 170 \text{ cm}^3 \text{ of chocolate}$$

Per bar

there is 100¢ in a dollar but
it takes 2¢ per each so you
need to

$$170 \times 2 = 340$$

∴ It costs the
company 3.40 \$
to make one
bar

You have been saving your Toblerone bar all week. When you go to eat it, you see that your sister ate half of it. What volume of delicious chocolate is left for you to eat?

$$340 \text{ cm}^3 \div 2 = V. \text{ left}$$

$$170 \text{ cm}^3 \text{ is left}$$

∴ you have 170 cm³ of chocolate
left.