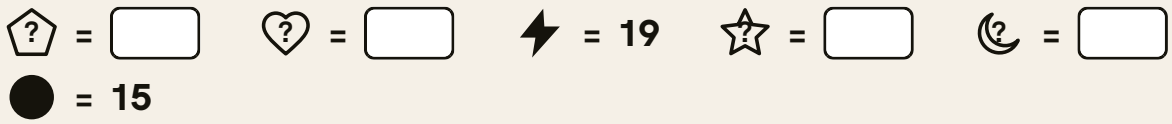
Robot Core Decryption Challenge

Calculate the value of each android symbol to find the four-digit passcode for the central server room.

Name: _____ **Date:** _____

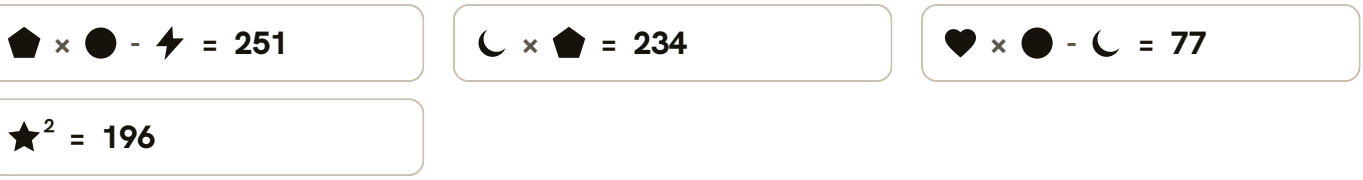
1 THE KEY



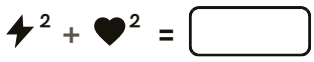
Every symbol is a whole number from 1 to 20. A number in front of a shape means multiply: 2 stars = 2 x star. A small 2 after a shape means square it: star^2 = star x star.

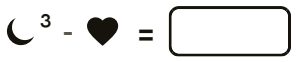
2 FIND THE MISSING VALUES

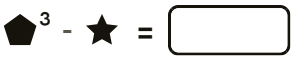
Some shapes in the key are missing. Use these to work them out, in order, and write them into the key.



3 CRACK THESE

1.  = ____

2.  = ____ CODE 1

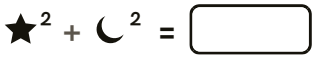
3.  = ____

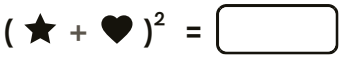
4.  = ____ CODE 2

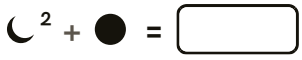
5.  = ____

6.  = ____ CODE 3

7.  = ____

8.  = ____ CODE 4

9.  = ____

10.  = ____

4 THE VAULT CODE

Write the ONES digit of your answers to problems 2, 4, 6, 8 (the ones tagged CODE 1-4), in that order. That opens the central server security.

TEACHER / PARENT

Answer Key

Robot Core Decryption Challenge · Grade 6 Crack the Code

The key

pentagon = **18** (hidden) heart = **6** (hidden) lightning bolt = **19** star = **14** (hidden)

moon = **13** (hidden) circle = **15**

Every symbol is a whole number from 1 to 20.

1.	lightning bolt^2 + heart^2	**397**
2.	moon^3 - heart	**2191**
3.	pentagon^3 - star	**5818**
4.	(lightning bolt - heart) × (lightning bolt + heart) ((lightning bolt - heart) x (lightning bolt + heart))	**325**
5.	pentagon × circle - heart^2	**234**
6.	moon^3	**2197**
7.	circle^3	**3375**
8.	star^2 + moon^2	**365**
9.	(star + heart)^2 ((star + heart)^2)	**400**
10.	moon^2 + circle	**184**

Vault code: **1 5 7 5**