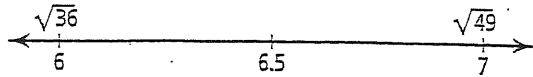


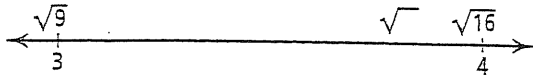
# Estimation and Square Roots Hand-in

Use your estimating skills to complete #1.

1. a) Estimate the square root of 40 using the number line below.



- b) Estimate the whole number that has a square root two thirds of the way along the number line between 3 and 4.



2. Estimate the square root to one decimal place. Show your work.

a)  $\sqrt{17}$

b)  $\sqrt{85}$

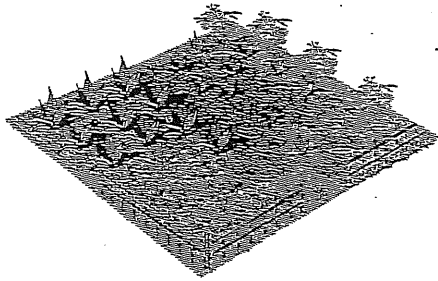
3. Identify a whole number that has a square root between:

a) 2 and 3

b) 11 and 12

4. Braden's new game board has 225 small squares. All of the small squares form one large square. How many small squares are along one side? Show your work.

5. Chelsea's square garden has an area of  $60 \text{ m}^2$ .



a) Estimate to one decimal place the side length of the garden.

b) She has 32 m of fencing to go around the garden. Does she have enough fencing? Explain your thinking.

7. Order the following numbers from least to greatest:  $7$ ,  $\sqrt{46}$ ,  $5.8$ ,  $\sqrt{27}$ ,  $6.3$ .

6. Carmel wants to mount an  $18 \text{ cm} \times 18 \text{ cm}$  square picture on a square board that is four times the area of the picture.

- a) What is the area of the picture?  
b) What is the area of the board?  
c) What are the dimensions of the board?

BONUS → NO help allowed!

8. A fitness centre will install a square hot tub in a  $6 \text{ m} \times 6 \text{ m}$  room. They want the tub to fill no more than 75% of the room's area.
- a) What is the maximum area of the hot tub?  
b) What dimensions, to a tenth of a metre, will the fitness centre order from the manufacturer? Explain.