Instructions: Complete your workings on loose-leaf. Show **ALL** workings and don't forget your units!

1. Martin's pen is dropped to the floor and landed across his toe. If the area it covers is 0.03m² and the force of the pen is 4N, what amount of **pressure** is his toe feeling?

2. A bronze statue weighs 2400 N and has a base that is 4 m by 0.5 m. What is the **pressure** the statue exerts on the floor?

3. A box has a weight of 120 N and the bottom of the box is 1.2 m². What is the **pressure** the box exerts on the floor?

4. A man weighing 800N walks on the sand in his flip-flops (total area 0. 3 m²). What **pressure** does he generate?

5. If the area of the bottom of Carlys foot is 0.2m², and the pressure on her jogger is 2200Pa, what **force** is traveling down her leg?

| 6. | The pressure of a nail was measured at 350 Pa. What <u>force</u> is exerted by the nail if the surface area is 0.13 m ² ? |
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| 7. | When you stand up on your feet your feet cover an area of about 0.2 m². Your feet push on the ground with a pressure of 50 Pa. What is your <u>weight</u> ? (Hint: Weight is a force.) |
| 8. | You drop a coin off of a building and in lands flat on the ground. It hits with a pressure of 200 Pa. It has a weight of 0.1 N. What is the <u>area</u> of the coin? |
| 9. | If the SupaCat launcher generates a pressure of 62,053 Pa and has a weight of 320,000N, what area presses on the sand? |
| 10. | A statue weighs 1000 N and exerts a pressure of 20,000 Pa. How big is the base of the statue in square meters? |