Jet Propulsion Laboratory
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Education

π IN THE SKY 8

How do you successfully sample an asteroid? NASA solves this real problem to explore asteroids and – with pi as your guide – so can you!

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SAMPLE SCIENCE

NASA's OSIRIS-REx mission was designed to travel to an asteroid called Bennu and bring a small sample back to Earth for further study. To achieve its mission, the spacecraft needed to make contact with 26 cm^2 of asteroid Bennu's surface and collect millimeter-size particles using its "contact-pad samplers." These are 1.5-centimeter diameter circular pads of Velcro-like stainless steel. There are 24 pads on the mechanism designed to collect the samples.

How many pads needed to make contact with Bennu's surface to meet the mission requirement?

If all 24 pads contacted Bennu, how much asteroid surface area would the contact pads sample?

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nasa.gov/osiris-rex