Surds

Year 10 · Number · y10-surds

Name: _____ Date: _____

Class: _____ Score: _____ / _____

Instructions
Answer every question in Practice. Try the Challenge section once Practice is complete. 10 questions in total.

Practice

1. Simplify sqrt 50 to the form asqrt b, where b has no square factors.

2. The length of a diagonal is calculated as sqrt 18 cm. Write this in its simplest surd form.

3. Simplify sqrt 72.

4. Work out sqrt 3 × sqrt 12. Give your answer in its simplest form.

5. Simplify 3sqrt 2 + 5sqrt 2.

6. sqrt a + sqrt b is NOT the same as sqrt (a+b) -- you can only add surds that have the SAME number under the root. Simplify sqrt 2 + sqrt 8.

7. When multiplying surds, sqrt a × sqrt b = sqrt (ab), then simplify the result if possible. Work out sqrt 2 × sqrt 8.

8. To simplify a surd, find the LARGEST square factor, not just any square factor. Simplify sqrt 32.

Challenge

1. Expand and simplify: (2 + sqrt 3)(2 - sqrt 3).

2. A rectangle has length (sqrt 5 + 2) cm and the same width, making it a square. Find its area in the form a + bsqrt 5.

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