KEY

Math 20-2

7.04 – Worksheet

Pg 198 #1acd: Write each expression in simplest form.

$\sqrt{5} * \sqrt{6}$

$\sqrt{30}$

$2\sqrt{3} * \sqrt{24}$

$2\sqrt{72}$

$2 \cdot 6\sqrt{2}$

$12\sqrt{2}$

$7\sqrt{32} * 2\sqrt{48}$

$7 \cdot 4\sqrt{2} \cdot 2 \cdot 4\sqrt{3}$

$28\sqrt{2} \cdot 8\sqrt{3}$

$224\sqrt{6}$

Pg 198 #5ade: Expand each expression and simplify.

$7(3 + \sqrt{12})$

$21 + 7\sqrt{12}$

$21 + 7 \cdot 2\sqrt{3}$

$21 + 14\sqrt{3}$

$2\sqrt{3}(\sqrt{18} + 5\sqrt{2})$

$2\sqrt{54} + 10\sqrt{6}$

$2 \cdot 3\sqrt{6} + 10\sqrt{6}$

$6\sqrt{6} + 10\sqrt{6}$

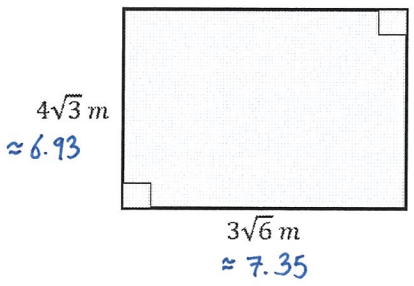
$16\sqrt{6}$

$(6 + \sqrt{6})(5 + \sqrt{10})$

$30 + 6\sqrt{10} + 5\sqrt{6} + \sqrt{60}$

$30 + 6\sqrt{10} + 5\sqrt{6} + 2\sqrt{15}$

Pg 198 #9a: Determine which figure covers the greater area *(i) using radicals, and (ii) using decimals.*



AREA $= (4\sqrt{3})(3\sqrt{6})$

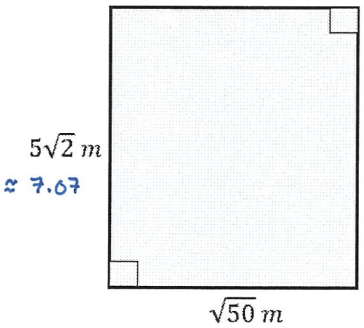
$= 12\sqrt{18}$

$= 12 \cdot 3\sqrt{2}$

$= 36\sqrt{2}$

AREA $\approx (6.93)(7.35)$

≈ 50.9



AREA $= (5\sqrt{2})(\sqrt{50})$

$= 5\sqrt{100}$

$= 5(10)$

$= 50$

AREA $\approx (7.07)(7.07)$

≈ 50

Math 20-2

KEY

Pg 203 #10abc: Simplify. Express your answer in simplest form.

$\sqrt{7} * \sqrt{8}$

$\sqrt{56}$

$\sqrt{12} * \sqrt{10}$

$\sqrt{120}$

$2\sqrt{30}$

$3\sqrt{5} * \sqrt{15}$

$3\sqrt{75}$

$3 \cdot 5\sqrt{3}$

$15\sqrt{3}$

Pg 203 #12acd: Expand and simplify.

$\sqrt{2}(4 + 5\sqrt{3})$

$4\sqrt{2} + 5\sqrt{6}$

$(\sqrt{3} + \sqrt{7})(5 + 8\sqrt{10})$

$5\sqrt{3} + 8\sqrt{30} + 5\sqrt{7} + 8\sqrt{70}$

$(2\sqrt{3} + 3\sqrt{5})(2\sqrt{3} - 3\sqrt{5})$

$4(3) - 6\sqrt{15} + 6\sqrt{15} - 9(5)$

$12 - 45$

-33