

Review Unit 11: Radical Expressions

Name _____

Date _____ Period ____

Simplify.

1) $5\sqrt{27}$

2) $-4\sqrt{45}$

3) $2\sqrt{30}$

4) $6\sqrt{80}$

5) $-3\sqrt{36}$

6) $-6\sqrt{108}$

7) $-3\sqrt{30}$

8) $2\sqrt{100}$

9) $3\sqrt{75}$

10) $-5\sqrt{54}$

Simplify by adding and subtracting.

11) $2\sqrt{6} - 3\sqrt{6}$

12) $-\sqrt{2} + 2\sqrt{2} + 3\sqrt{6}$

Simplify by multiplying.

13) $3\sqrt{5} + 2\sqrt{45}$

14) $\sqrt{6} \cdot \sqrt{10}$

15) $4\sqrt{10} \cdot 3\sqrt{3}$

16) $\sqrt{10}(\sqrt{10} + 4)$

17) $-3\sqrt{3}(-5\sqrt{6} + 3)$

18) $(-3 - \sqrt{2})(1 + 5\sqrt{2})$

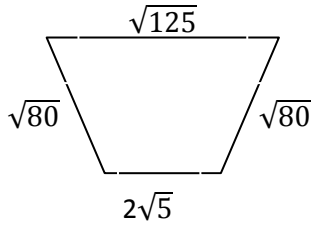
Simplify.

19) $\sqrt{\frac{2}{3}}$

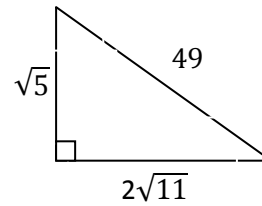
20) $\sqrt{\frac{12}{4}}$

Review Application and Extension

1. Find the perimeter in simplest radical form:

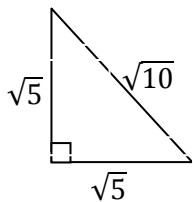


2. Find the area of the triangle below.
(Remember: Area of Triangle = $\frac{1}{2}bh$)



3. Have you ever eaten at “Dicke Emma’s” in Ramstein? The portions are **HUGE!** In fact, Mr Brust argues that one single hamburger has $\sqrt{5}(150\sqrt{5} + 25\sqrt{20})$ cows in it. How many cows is this?

4. A special type of triangle in geometry is the “45-45-90” right triangle. The lengths of the sides of one of these triangles is $\sqrt{5}$ cm, $\sqrt{5}$ cm and $\sqrt{10}$ cm. Find the perimeter and area of this triangle in simplest radical form.



Perimeter _____

Area _____