

Period: _____

Name: _____

Chapter 5 Assignment – Radical Expressions & Equations

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Show all of your work.

1) Simplify (1 mark each):

a) $\sqrt{16x^7}$

b) $\sqrt{90}$

c) $\sqrt{20x^8y^5}$

d) $\sqrt[3]{125m^{11}}$

ANSWER:

ANSWER:

ANSWER:

ANSWER:

2) Change to an entire radical (1 mark each):

a) $4\sqrt{5}$

b) $2\sqrt[3]{6}$

ANSWER:

ANSWER:

3) Write another way (**as a radical**), then simplify (1 mark): $32^{\frac{1}{4}}$

ANSWER:

4) Simplify (2 marks each):

a) $-6\sqrt{12} + 2\sqrt{8} - 5\sqrt{75}$

b) $3\sqrt[3]{16x^4y^5} - xy\sqrt[3]{54xy^2}$

ANSWER:

ANSWER:

5) Simplify (2 marks each):

a) $-2\sqrt{6x}(3\sqrt{2x})$

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

ANSWER:

ANSWER:

6) Simplify (**rationalize the denominator**) (2 marks each):

a) $\frac{-42\sqrt[3]{48x^6}}{7\sqrt[3]{3x^2}}$

b) $\frac{-x\sqrt{3}}{3\sqrt{2x}}$

c) $\frac{1-\sqrt{3}}{\sqrt{3}+2}$

ANSWER:

ANSWER:

ANSWER:

7) Solve and check (2 marks each):

a) $3\sqrt{9-x} + 12 = -18$

CHECK(S):

ANSWER(S):

b) $\sqrt{2y-3} - 7 = 2$

CHECK(S):

ANSWER(S):

9) Solve and check (2 marks): $\sqrt{10x-4} = 3\sqrt{x}$

CHECK(S):

ANSWER(S):

10) The volume of a sphere is $V = \frac{4}{3}\pi r^3$. If the volume of a sphere is 36cm^3 , what is the radius? (answer in exact form) (3 marks)

SENTENCE ANSWER: