

Name _____

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Factor out the GCF from the polynomial. (3 pts. each)

1) $8m^6 - 36m^4 + 16m^2$ 1) _____

2) $120m^9 - 24m^7 + 60m^2$ 2) _____

Factor the four-term polynomial by grouping. (4 pts. each)

3) $3xy - 9x + 8y - 24$ 3) _____

4) $10x^2 - 8x - 25x + 20$ 4) _____

Factor the trinomial completely. (3 pts. each)

5) $x^2 + x - 56$ 5) _____

6) $x^2 + 2xy - 8y^2$ 6) _____

Factor completely. (4 pts. each)

7) $7x^2 - x - 180$ 7) _____

8) $20x^2 + 23x + 6$ 8) _____

Factor the binomial completely. (3 pts. each)

9) $49x^2 + 36$ 9) _____

10) $144 - w^2$ 10) _____

Solve the equation. (5 pts. each)

11) $x^3 + 7x^2 - 44x = 0$ 11) _____

12) $x^2 + 7x = 18$ 12) _____

13) $2x^2 - 5x - 7 = 0$ 13) _____

Simplify. Assume that all variables represent positive numbers. (4 pts. each)

14) $\sqrt{486x^2}$ 14) _____

15) $\sqrt{12x^{64}}$ 15) _____

Add or subtract each radical. (4 pts. each)

16) $\sqrt{20} + \sqrt{405}$

16) _____

17) $2\sqrt{8} - 4\sqrt{72}$

17) _____

Multiply and simplify. (4 pts. each)

18) $\sqrt{137x} \cdot \sqrt{137x}$

18) _____

19) $(9\sqrt{y})^2$

19) _____

20) $\sqrt{75xy^6} \cdot \sqrt{3x^2y^6}$

20) _____

21) $(\sqrt{7} + 2\sqrt{3})(\sqrt{3} - 4\sqrt{7})$

21) _____

Rationalize the denominator and simplify. (3 pts.)

22) $\sqrt{\frac{9}{10}}$

22) _____

Write down the following Equation (2 pts. each)

23) Pythagorean Theorem

23) _____

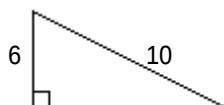
24) Distance Formula

24) _____

Use the Pythagorean theorem to find the unknown side of the right triangle. (6 pts.)

25)

25) _____



Use the distance formula to find the distance between the points. (6 pts.)

26) (2, -2), (4, -6)

26) _____