

Math 099, Spring 2019, Form 8, Answer Key

① $\frac{1}{2m^3}$

② $\frac{64y^3}{x^3 \cancel{7^3}}$

③ $2x^8y^3 \sqrt[3]{x}$

④ $16x + 8\sqrt{xy} + y$

⑤ $\frac{x-13}{(x+2)(x-3)}$

⑥ $\frac{3(x-4)(x+6)}{x-5}$

⑦ $\frac{1}{6}$

⑧ $\ln(8P^8)$

⑨ $(3, 10)$

⑩ $P(t) = 10(3)^x$

11a) 264 feet

b) 7.06 seconds

12a) $\frac{33}{12}$

b) $\frac{6a-1}{a+2}$

c) $x = -8/3$

d) $(-\frac{1}{2}, 0)$

e) $(0, \frac{3}{7})$

13a) Independent (N)

Number of times FB is checked

Dependent (t)

Time spent preparing

13b) Linear, as N increases by 2, t decreased by 15

13c) $t(N) = 130 - \frac{15}{2}N$

14a) \$5372.54

b) ≈ 11.90 years

~~15~~ a) $[-5, 4]$ OR $-5 \leq x \leq 4$

15b) $[-2, 4]$ OR $-2 \leq y \leq 4$

15c) 2 15d) $x=4$

⑩ $C = -\frac{3y-x}{6}$ OR $C = -\frac{x+3y}{6}$

⑪ $x=22$

⑫ $m = \frac{25}{6}$

⑬ $x = 5 \pm \sqrt{3}$

⑭ $m=4$

⑮ $t = \frac{3 \pm \sqrt{2}}{2}$

OR $t = \frac{3}{2} \pm \frac{\sqrt{2}}{2}$

22a) $(-0.80, 0), (0, 0), (0.72, 0)$

b) $(0, 0)$

c) $(-0.83, 0.17)$