Practice Exam #1

Short Answer

1. a) $32.4\ cm^3$
   b) $817.3\ ft^3$
2. $\angle YXZ = 113°$
3. a) $3\sqrt{5}$
   b) $2^3\sqrt{5}$
   c) $9\sqrt{3}$
4. 6
5. 240"
6. 132'
7. $x = -2$
8. plug in & make sure LHS = RHS
9. a) G (−2, 0) H (2, 4)
   b) rise = 4 c) run = 4
   d) $m = 1$

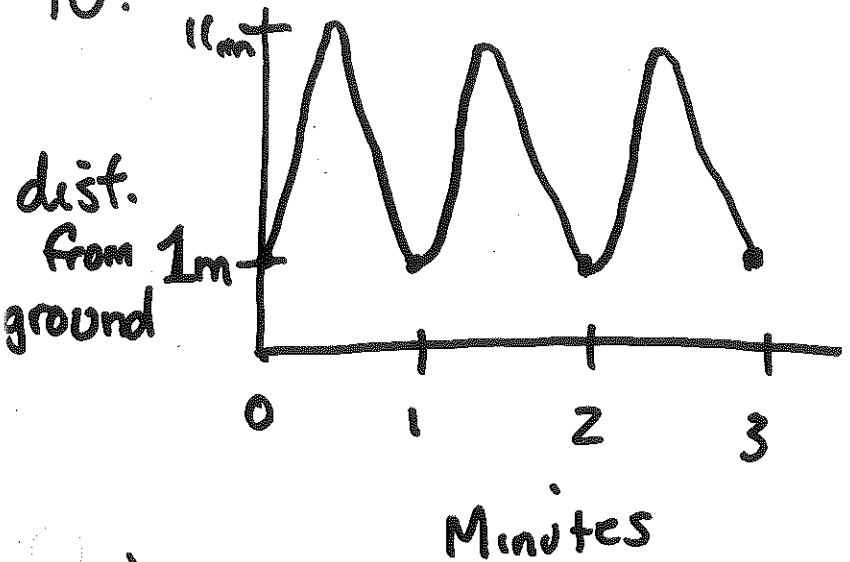
LONG ANSWER (part c)

1. a) $972\ ft^2$
   b) $2122.85
2. 550 cm
3. $\angle B = 49.6°$
   $\angle C = 40.4°$
   $c = 6.8$
4. a) $x = 3.2$
   b) $\angle X = 33.7°$
5. 0.92 hours or 55.46 minutes
6. a) $2x^2y^4z^{4/5}$
   b) $18x^5y^{10}$
   c) $-3x^2+15x-20$
   d) $4x^2$
7. a) $4(x-2)(x+2)$
   b) $(x+4)(x+3)$
   c) $(5x+4)(2x+1)$
   d) $x(x-7)(x+5)$
8. → graph $y = -\frac{5}{2}x+5$
9. a) D: $[0,\infty)$ $\{x \mid x \geq 0, x \in \mathbb{R}\}$
   R: $(-\infty,\infty)$ $\{y \mid y \in \mathbb{R}\}$

page 2 of key

ab) Not a function b/c it fails vertical line test

10.



11. a) first $r = 9$, then diameter $= 18$ cm

b) $h = 36$ cm

12. $(1, 3)$ ~ use elimination or substitution

13. $0 = x - 10y + 35$

14. first $k = -\frac{1}{7}$, then $m = \frac{16}{7}$