

1a) $\frac{x^2 - 4}{x^2 + 4x - 4}$

b) $\frac{2x + y}{12}$

2 $\frac{x^2 + 8x + 3}{(x-1)(x+1)(x-3)}$

3a). $\frac{25x - 20\sqrt{x} + 4}{25x - 4}$

b) $x = 1 \pm \sqrt{7}$

4a) $\frac{x^{26/3}}{81y^{3/2}}$

b) $-3x^9\sqrt{2y^{29}}$

5. $x = -2$

6. center (5,-3) radius $\sqrt{21}$

7. $x = \frac{1}{3}$

8. The integer is 5.

9a) $\left(-5, \frac{5}{2}\right)$

b) $3x + 2y = 4$ or $y = -\frac{3}{2}x + 2$

10a) length of side AC = $\frac{15 \sin(111^\circ)}{\sin(38^\circ)} \approx 22.75$

11) largest angle measures $\approx 133^\circ$.

12a) $f(-7) = -60$ b) $f(1-2a) - f(6a) = 64a^2 + 48a - 7$