State Mathematics Finals; Level I
May 4, 2017
1. Solve for x:
$$3x + 5c = 5x - 3c$$
:
(a) $\frac{c}{2}$ (b) $\frac{c}{4}$ (c) $= 6c$ (d) $4c$ (c) $\frac{3c}{8}$
2. Find the next number in the following sequence: 0, 1, 1, 2, 4, 7, 13, 24, ...
(a) 37 (b) 42 (c) 44 (d) 45 (e) 48
3. Determine the length of the perimeter of a right triangle with area 24 cm² and hypotenuse of 10 cm.
(a) 24 cm (b) 20 cm (c) 14 cm (d) 25 cm (e) $10(1 + \sqrt{2})$ cm
4. Abe earns \$10 an hour helping his neighbor do yard work. Abe is trying to save up for a new
phone-8 which will cost him \$1,100 + 7% tax. If he has already saved \$307, what is the
minimum number of hours he has to work in order to save enough money for this iPhone?
(a) 110 hrs. (b) 118 hrs. (c) 80 hrs. (d) 82 hrs. (e) 87 hrs.
5. Find the sum: $2+5+8+11+14+17+\cdots+299$.
(a) $20,100$ (b) $451,850$ (c) $15,500$ (d) $44,850$ (c) $15,050$
6. Simplify the expression $\frac{3}{A-2} = \frac{3}{A+2} + \frac{6A}{A^2-4}$.
(a) $\frac{12}{A+2}$ (b) $\frac{6}{A-2}$ (c) $\frac{18}{A^2-4}$ (d) $\frac{6A-3}{A^2-4}$ (c) $\frac{12A}{A^2-4}$











36. Assume that the probability of Ferrari beating Mercedes in the next Formula 1 race is 40%, and that the chance of rain (i.e. bad weather) at the time of the race is 30%. If the probability of it raining and Mercedes beating Ferrari is 25%, what is the probability of Ferrari winning and it not raining?

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multinu m # 3

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Y.

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