Regents	Exam Questions by Topic
PROBA	BILITY: Theoretical Probability
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	LITY: Theoretical Probability
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1	Which inequality represents the probability, x, of any event happening?
	(1) $x \ge 0$ (3) $x < 1$
060630a	(2) 0 < x < 1
2	Which event has a probability of zero?
	(1) choosing a letter from the alphabet that has line symmetry
010811a	(2) choosing a number that is greater than 6 and is even
	(3) choosing a pair of parallel lines that have unequal slopes
	(4) choosing a triangle that is both isosceles and right
3	A fair coin is thrown in the air four times. If the coin lands with the head up on
	the first three tosses, what is the probability that the coin will land with the
069901a	head up on the fourth toss?
	(1) 0 (3) $\frac{1}{8}$
	1 1
	(2) $\frac{1}{16}$ (4) $\frac{1}{2}$
	10 2
4	A fair coin is tossed three times. What is the probability that the coin will land
	tails up on the second toss?
010209a	$(1) \frac{1}{2}$ $(3) \frac{2}{3}$
	(1) $\frac{1}{3}$ (3) $\frac{2}{3}$ (2) $\frac{1}{2}$ (4) $\frac{3}{4}$
	$(2) \frac{1}{2}$ $(4) \frac{3}{2}$
	2 4
5	When a fair coin was tossed ten times, it landed heads up the first seven times.
3	What is the probability that on the eighth toss the coin will land with tails up?
060712a	7
	(1) $\frac{3}{10}$ (3) $\frac{7}{10}$
	(2) $\frac{1}{2}$ (4) $\frac{3}{7}$
	$\frac{(2)}{2}$ $\frac{7}{7}$

6 Seth tossed a fair coin five times and got five heads. The probability that the next toss will be a tail is

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- (1) 0
- (2) $\frac{1}{6}$

As captain of his football team, Jamal gets to call heads or tails for the toss of a fair coin at the beginning of each game. At the last three games, the coin has landed with heads up. What is the probability that the coin will land with heads up at the next game? Explain your answer. 7 010832a