5.8 Mixed Probability Problem Set: 10-minute Pack

Calculators not allowed · about 10 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 A spinner has three equal sectors labelled A, B and C. The spinner is spun twice. Find the probability of getting A at least once.

(3)

2 A school has 40 students in a class. 25 students take music, 18 take art and 10 take both music and art. A student is chosen at random. Calculate the probability the student takes music or art.

(3)

3 Events A and B are independent. P(A) = 1/6 and P(B) = 5/8. Work out the probability that both A and B happen.

(2)

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Mark scheme · 5.8 Mixed Probability Problem Set: 10-minute Pack

Question 1

recognition that easier to use complement: probability no A in two spins = (2/3)*(2/3)	M1
calculate $(2/3)^2 = 4/9$	M1
1 - 4/9 = 5/9 cao	A1

Answer: **5/9**

Question 2

use of inclusion-exclusion: 25 + 18 - 10 = 33 students take music or art	M1
recognition total 40 and forming probability 33/40	M1
33/40 cao	A1

Answer: **33/40**

Question 3

1/6 x 5/8	M1
5/48 cao	A1

Answer: **5/48**

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