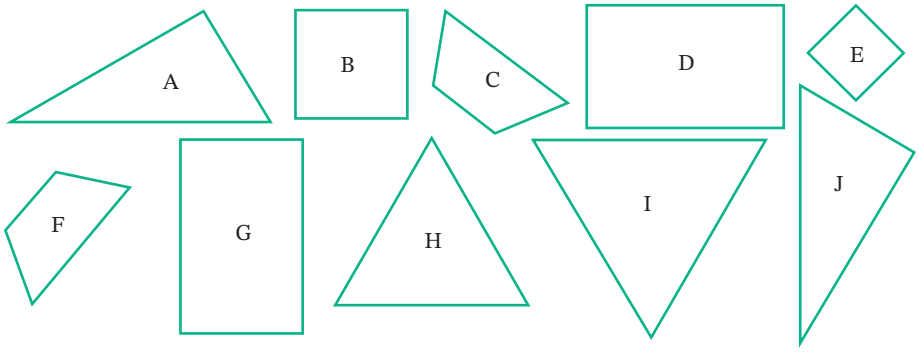
PRACTICE SET 3

ANSWERS ON P. 575

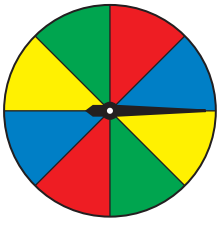
8.02

1 Identify the 3 pairs of congruent shapes from the shapes below.



9.01

2 If this spinner is spun, find the probability, as a percentage, that the arrow lands on:



a green

b a traffic light colour

c a colour that is not red

7.01

3 Mrs Smart gave her class a quick quiz. The results are shown in the table.

Mark	Tally	Frequency
6	𝍸	
7	𝍸 ||	
8		5
9	𝍸 𝍸	
10		3

a Copy and complete the table.

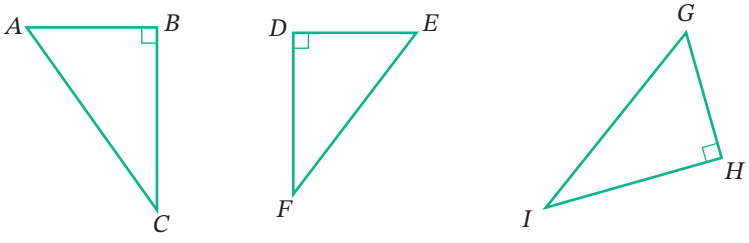
b How many students are there in Mrs Smart's class?

7.07

c Construct a frequency histogram and polygon for these results.

8.03

4 **a** Name the 2 congruent triangles below, using '△ ____ ≡ △ _____' notation.



b For the congruent triangles, name one pair of matching sides and one pair of matching angles.

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5 A die was rolled 40 times and the results are shown here. 7.01

5	1	5	2	3	2	6	5	2	5
4	2	5	2	6	2	6	4	3	1
5	5	3	6	4	2	6	5	6	5
5	2	3	3	3	3	3	1	2	1

a Draw a frequency table for these results.

b Draw a divided bar graph to represent this information.

6 Is each type of data categorical or numerical? 7.02

a number of cars owned

b favourite drink

c type of hairstyle

7 Is each type of data discrete or continuous? 7.02

a lap time of swimmer

b distance from city

c points scored by basketball players

8 A die is rolled. Find the probability that the number that comes up is: 9.01

a even

b at least 2

c a composite number

9 Construct a dot plot for these Mathematics test marks. 7.06

22	16	10	8	12	11	15	13	12	13	11	16
11	12	10	10	12	12	15	11	13	15	17	13

a Find the median.

b Find the mode.

c What is the outlier?

d Where are the marks clustered?

10 Construct a triangle with: 8.03

a sides of 7 cm, 5 cm and 9 cm

b sides of 4 cm and 5 cm and an included angle of 65°

11 For the data below, find: 7.03

90	89	95	92	90	92	97	93	90	97

a the mean 7.04

b the mode

c the median

d the range

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9.02 **12** A pack of cards contains 10 blue, 6 purple and 4 pink cards. One card is drawn from the pack at random. Find the probability that this card is not purple.

7.05 **13** The ages of people taking out a policy with an insurance company are shown.

34	32	28	30	33	28	30	29	33	28	34	34
28	30	32	32	34	31	30	31	28	30	28	30

a Construct a frequency table of the ages, including an 'fx' column.

b What fraction of the people are under 30 years of age?

c For the above data, find:

i the mean (to one decimal place)

ii the median

iii the mode

iv the range.

9.03 **14** In a group of 50 Year 9 students, 34 study History, 25 study Japanese and 11 study both.

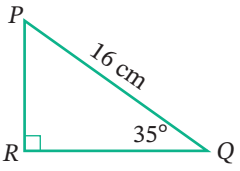
a Represent this information in a Venn diagram.

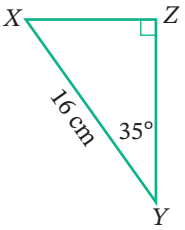
b How many students study Japanese but not History?

c What is the probability that a student randomly chosen from this group studies neither History nor Japanese?

8.04 **15** **a** Name the 4 tests for congruent triangles.

b Which test can be used to prove that these triangles are congruent?





9.04 **16** Year 8 students were surveyed on whether they participated in weekend sport.

a Copy and complete this 2-way table.

	Plays weekend sport	Does not play weekend sport	Total
Male	49		
Female		45	84
Total		68	

b How many students are in Year 8?

c How many Year 8 students play weekend sport?

d If a student is chosen at random from Year 8, what is the probability that the student:

i is female?

ii is male or plays sport but not both?

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17 The marks scored by 10 students in Maths and Science exams are shown. 7.08

Maths	35	58	87	43	52	96	23	35	48	58
Science	43	69	73	62	54	88	24	40	40	60

a Show these marks on a back-to-back stem-and-leaf plot.

b Find the median and the range for each exam.

c Based on these results, which exam do you think was more difficult? Justify your answer.

18 The nationalities of players in a junior tennis tournament are shown below. 9.05

Australia	USA	UK	Asia	Europe
3	9	4	20	28

Find the probability that a player selected at random from this group:

a is Australian

b comes from Asia

c is not American

d is from Europe or America.

19 Joanna wants to find the most popular TV program in Australia. 7.09

a Should she use a sample or a census? Give a reason for your answer.

b Suppose she decides to use a sample. How could she choose a representative sample? 7.10

c Give an example of a biased question she could ask.

d Change your question from part **c** so that it is NOT biased.