# **Revision & Practice**

# Worksheet 32

## A Measurement: Working with solids (Pythagoras' theorem in 3 dimensions)

Skill 7.9

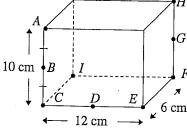
- 1 Find the lengths of these lines:
  - (a) *AD*
- (b) AE(e) AF
- (c) BD

(d) *AH* (g) *EH* 

BI

(j)

- (h) *EI*
- (f) EG(i) GI

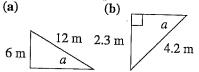


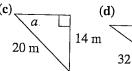
- 2 Find the longest pencil to fit inside a cylinder of height 12.5 cm and radius 3 cm.
- 3 Find the height of a cone whose slant edge is 20 cm and base diameter is 12 m.

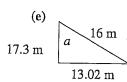
#### B Trigonometry: Using sin to find angles

Skill 8.4

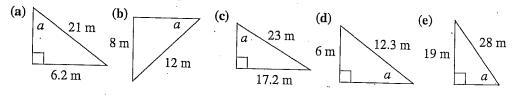
1 Find the angles expressed in decimal form:







2 Find the angles expressed in degree/minute form:

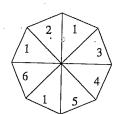


### C Chance and data: Displaying sample spaces

**Skill 9.9** 

Use a lattice diagram to display the sample space of:

- 1 Tossing a fair coin and rolling a die with numbers  $7 \rightarrow 12$ .
- 2 Spinning this spinner twice.



### D Chance and data: Probability of multiple independent events

**Skill 9.10** 

A box contains 6 red and 7 blue balls. The balls is selected and its colour noted. It is then replaced and another taken out. What is the probability of selecting:

1 two red balls

- 2 two blue balls
- 3 red then blue in that order
- 4 red and blue or blue and red?

## E Calculators: Repeating an operation on a range of numbers

**Skill 10.3** 

Complete the following operations on this data set:

 $\{3.8, -4.2, 16, -2.8, 3.04, 1.2, 18.07, 3.9, 4.2, -3.2, 1.001, 6.3, -4.2, 17.3, 18.2, -3.8\}$ 

1 multiply them by -3

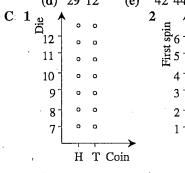
2 divide them by 0.2

3 add 3.12 to them

4 subtract 1.021 from them

#### Worksheet 32

- **A** 1 (a) 11.66 cm (b) 15.62 cm (c) 7.81 cm
  - (d) 13.42 cm (e) 16.73 cm (f) 7.81 cm
  - (g) 11.66 cm (h) 13.42 cm (i) 13 cm
  - (j) 7.81 cm
  - 2 13.87 cm
- 3 19.08 cm
- **B** 1 (a) 30°
- 33.20° (c) 44.43° (b)
- (d) 32.73°
- (e) 54.46°
- 2 (a) 17°10'
- 41°49' (b)
- (c) 48°24'
- (d) 29°12'
- 42°44' (e)



**D** 
$$\mathbf{1}^{-6} \left( \frac{6}{13} \right)^{-6} = \frac{36}{169}$$
  
 $\mathbf{3} \quad \frac{6}{169} \times \frac{7}{169} = \frac{42}{169}$ 

- 13 169
- $\frac{7}{13} = \frac{82}{169}$
- E 1 -11.4, 12.6, -48, 8.4, -9.12, -3.6, -54.21, -11.7, -12.6, 9.6, -3.003, -18.9, 12.6, -51.9, -54.6, 11.4
  - **2** 19, -21, 80, -14, 15.2, 6, 90.35, 19.5, 21, -16, 5.005, 31.5, -21, 86.5, 91, -19
  - 3 6.92, -1.08, 19.12, 0.32, 6.16, 4.32, 21.19, 7.02, 7.32, -0.08, 4.121, 9.42, -1.08, 20.42, 21.32, -0.68
- 2.779, -5.221, 14.979, -3.821, 2.019, 0.179, 17.049, 2.879, 3.179, -4.221, -0.02, 5.279, -5.221,16.279, 17.179, -4.821