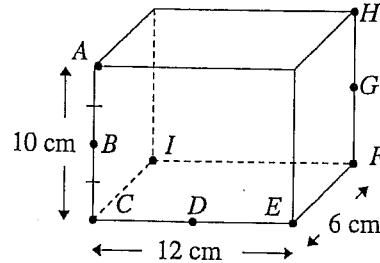


## A Measurement: Working with solids (Pythagoras' theorem in 3 dimensions)

Skill 7.9

1 Find the lengths of these lines:

- |          |          |          |
|----------|----------|----------|
| (a) $AD$ | (b) $AE$ | (c) $BD$ |
| (d) $AH$ | (e) $AF$ | (f) $EG$ |
| (g) $EH$ | (h) $EI$ | (i) $GI$ |
| (j) $BI$ |          |          |

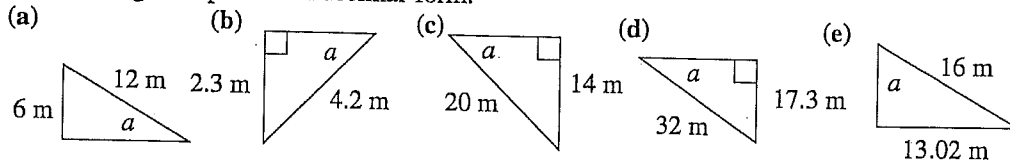


- Find the longest pencil to fit inside a cylinder of height 12.5 cm and radius 3 cm.
- Find the height of a cone whose slant edge is 20 cm and base diameter is 12 m.

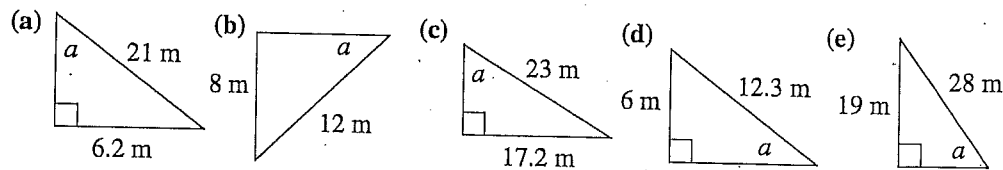
## B Trigonometry: Using sin to find angles

Skill 8.4

1 Find the angles expressed in decimal form:



2 Find the angles expressed in degree/minute form:

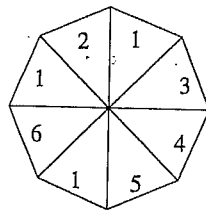


## C Chance and data: Displaying sample spaces

Skill 9.9

Use a lattice diagram to display the sample space of:

- Tossing a fair coin and rolling a die with numbers 7 → 12.
- 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 |

