16 (a) Angle OBT = Angle OAT = 90° (tan ⊥ rad)
OA = OB (radius of circle)
TA = TB (tangent from external point)
So triangle OAT is congruent to triangle OBT (SAS)

17 (a) 3.6 km/h

(b) (i) 12.24 pm

(ii) 8 km

(c) $2\frac{2}{9}$ m/s

18 (a) (i) {5, 6, 10, 15}

(ii) {5}

(b) $R \cap Q = \emptyset$ AND $16 \notin P$

19 $360

20 (a) 12 cm

(b) 6.35 cm

21 (a) $\begin{pmatrix} 24 & 14 \\ 29 & x \\ 20 & 15 \end{pmatrix}$

(b) $\begin{pmatrix} 800 & 822 \\ 290 + 40x & 232 + 45x \\ 800 & 835 \end{pmatrix}$

(c) 11

22 $2y = 3x - 7$

23 (a) 0.8

(b) $109

24 (a) (i) $180 \leq \text{height} \leq 200$

(ii) $178\frac{2}{3}$

(b) (i) 24

(ii) 48

(iii) Less widespread

25 (a) (ii) $p = 1.5, q = 6.5$

(b) 64

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