

## Q1. (2017)

|       |                                                                                                                                                                                           |       |                    |
|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------------------|
| 10(b) | $2x + 10 = 60$<br>or $2x = 60 - 10$<br>or $2x = 50$<br>or $x = 25$                                                                                                                        | M1    |                    |
|       | $3 \times \text{their } 25 - 20 \text{ or } 55$<br>or $180 - 55 \text{ or } 125$                                                                                                          | M1dep | oe                 |
|       | $(y \approx) 125 \text{ and bigger}$<br>or $(y \text{ is}) 15 \text{ bigger}$                                                                                                             | A1ft  | oe<br>ft their (a) |
|       | <b>Additional Guidance</b>                                                                                                                                                                |       |                    |
|       | Note: A complete logical explanation of the effect of lines not being parallel<br>eg<br>$w$ is smaller so $2x + 10$ is smaller so $x$ is smaller so $3x - 20$ is smaller so $y$ is bigger |       | M1M1A1             |
|       | $2 \times 25 + 10 = 60$<br>$y$ is bigger ticked but no valid working                                                                                                                      |       | M1M0A0<br>M0M0A0   |

## Q2. (2018)

|              |                                                                                           |       |                                        |
|--------------|-------------------------------------------------------------------------------------------|-------|----------------------------------------|
| 8(a)<br>cont | <b>Alternative method 3 – Using simultaneous equations</b>                                |       |                                        |
|              | $y = 3x + 4$<br>or $y - 3x = 4$<br>or $2y = 6x + 14$<br>or $2y - 6x = 14$                 | M1    | oe<br>Equates coefficients in any form |
|              | Any attempt to eliminate both variables from their equations                              | M1dep |                                        |
|              | States simultaneous equations have no (real) solution and concludes parallel              | A1    |                                        |
|              | <b>Additional Guidance</b>                                                                |       |                                        |
|              | To award A mark on Alternative method 2, the working must be seen                         |       |                                        |
|              | $y = 3x + 4$ and lines have gradient of $3x$                                              |       | B2                                     |
|              | $y = 3x + 4$ and $3x$ identified in both equations                                        |       | B2                                     |
|              | Both lines have gradient $3x$                                                             |       | B1                                     |
|              | $y = 3x + 7$ , gradient 3 and $y = 3x + 8$ , gradient 3 (error in rearrangement)          |       | B1                                     |
|              | $y = 3x + 8$ , gradient 3 (error in rearrangement)                                        |       | B0                                     |
|              | Parallel as both have same gradient                                                       |       | B0                                     |
|              | $2(3x + 7) - 6x = 8$<br>$6x + 14 - 6x = 8$<br>$14 = 8$                                    |       | M1<br>M1                               |
|              | $y = 3x + 7$ and $y = \frac{8 + 6x}{2}$ are equated coefficients,<br>Alternative method 3 |       | M1                                     |

## Q3. (2020)

| Q | Answer             | Mark | Comments |
|---|--------------------|------|----------|
| 2 | $y = \frac{1}{2}x$ | B1   |          |

## Q4. (2020)

| Q  | Answer                                                                                                 | Mark  | Comments                                 |
|----|--------------------------------------------------------------------------------------------------------|-------|------------------------------------------|
| 28 | $-\frac{1}{4}$ or $-1 \div 4$                                                                          | M1    | oe                                       |
|    | $5 = \text{their } -\frac{1}{4} \times 8 + c \text{ or } c = 7$<br>or<br>$y - 5 = -\frac{1}{4}(x - 8)$ | M1dep | oe<br>$y = -\frac{1}{4}x + 7$ implies M2 |
|    | $-\frac{1}{4}x + 7 = 0$ or $(x =) 28$                                                                  | M1dep | oe                                       |
|    | (28, 0)                                                                                                | A1    | SC2 (-12, 0) or (6.75, 0)                |
|    | <b>Additional Guidance</b>                                                                             |       |                                          |
|    | Answer (0, 28) is A0 but may score M marks if working seen                                             |       |                                          |
|    | (-12, 0) from using the gradient of the perpendicular as $\frac{1}{4}$                                 |       | SC2                                      |
|    | (6.75, 0) from using the gradient of the perpendicular as 4                                            |       | SC2                                      |