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## MATHS

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## MATHS (ENGLISH)

## LINEAR FUNCTIONS

Examples

1. Describe the line $3 x=12$.

## 2. Describe the line $x-3 y=6$.

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3. Write an equation of the line containing
$(6,-5)$ and having slope $\frac{3}{4}$.

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4. Write an equation of the line containing
$(1,-3)$ and ( $-4,-2$ ).

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5. The equation of line $l_{1}$ is $y=2 x+3$, and the equation of line $l_{2}$ is $\mathrm{y}=2 \mathrm{x}-5$.

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6. The equation of line $l_{1}$ is $y=\frac{5}{2} x-4$, and the equation of line $l_{2}$ is $y=-\frac{2}{5} x+9$.

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7. Write an equation of the line containing (1,7)
and parallel to the line $3 x+5 y=18$.

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8. Write an equation of the line containing $(-3,2)$ and perpendicular to $y=4 x-5$.

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9. Given point $(2,-3)$ and point $(-5,4)$, find the length of $\overline{P Q}$ and the coordinates of the midpoint, $M$.

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1. The slope of the line through points $A(3,-2)$ and $\mathrm{B}(-2,-3)$ is
A. -5
B. $-\frac{1}{5}$
C. $\frac{1}{5}$
D. 1

Answer: C

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2. The slope of line $8 x+12 y+5=0$ is

$$
\begin{aligned}
& \text { A. }-\frac{3}{2} \\
& \text { B. }-\frac{2}{3} \\
& \text { C. } \frac{2}{3} \\
& \text { D. } 2
\end{aligned}
$$

Answer: B

## 3. The slope of the line perpendicular to line

$$
3 x-5 y+8=0 \text { is }
$$

$$
\begin{aligned}
& \text { A. }-\frac{5}{3} \\
& \text { B. }-\frac{3}{5} \\
& \text { C. } \frac{3}{5} \\
& \text { D. } \frac{5}{3}
\end{aligned}
$$

Answer: A
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4. The $y$-intercept of the line through the two points whose coordinates are ( $5,-2$ ) and $(1,3)$ is

$$
\begin{aligned}
& \text { A. }-\frac{5}{4} \\
& \text { B. } \frac{5}{4} \\
& \text { C. } \frac{17}{4} \\
& \text { D. } 7
\end{aligned}
$$

Answer: C

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5. The equation of the perpendicular bisector of the segment joining the points whose coordinates are $(1,4)$ and $(-2,3)$ is

$$
\begin{aligned}
& \text { A. } 3 x-2 y+5=0 \\
& \text { B. } x-3 y+2=0 \\
& \text { C. } 3 x+y-2=0 \\
& \text { D. } x=3 y+11=0
\end{aligned}
$$

Answer: C

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6. The length of the segment joining the points with coordinates $(-2,4)$ and $(3,-5)$ is
A. 2.8
B. 3.7
C. 10
D. 10.3

Answer: D
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7. The slope of the line parallel to the line whose equation is $2 x+3 y=8$ is
A. -2
B. $-\frac{3}{2}$
C. $-\frac{2}{3}$
D. $\frac{2}{3}$

Answer: C

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